Appendix 1
Criteria for Land Ownership Adjustment

FLPMA and other Federal laws, Executive Orders, and policies suggest criteria to use when categorizing public lands for retention or disposal, and for identifying acquisition priorities. The following list of criteria is not considered all-inclusive, but represents the major activities and issues affecting lands within the planning area. These criteria are meant to streamline consideration of land tenure adjustment proposals.

These criteria would be among those considered in preparing land reports and environmental analyses for specific land tenure adjustment proposals following completion of the plan amendments. Land tenure adjustments involving sales, exchanges, or R&PP patents may be permitted based on site-specific application of these adjustment criteria. Transfer to other public agencies will also be considered where improved management efficiency would result. All disposal actions would be consistent with the Alternative and zones selected in the final decision for this document.

Lands with Highest Priority for Retention or Acquisition

- Those lands specifically identified by the Shoshone-Bannock and/or Shoshone-Paiute Tribes as having special importance related to treaty and/or traditional uses/values;
- Important, crucial, or critical habitat for special status species including proposed species, listed species, and candidate species under the Endangered Species Act; State-listed species; and BLM State Director-designated sensitive species;
- Riparian areas and wetlands;
- Parcels that provide public and/or administrative access to larger blocks of public land;
- Lands with special designation or management emphasis (see category below).

Special Designation/Management Areas Where it is a High Priority to Acquire Inholdings

- Areas of Critical Environmental Concern, or lands adjacent to and important for expansion of such areas;
- National Historic Trails;
- Wild and Scenic Rivers (eligible, recommended suitable, or designated);
- Significant cultural resources and sites eligible for inclusion on the National Register of Historic Places;
- Wilderness and Wilderness Study Areas.

Areas Generally Retained, but May be Exchanged for Parcels with Higher Resource Values

- Important habitat for fish or wildlife;
- Developed recreation sites and recreation access;
- Recreation opportunities and benefits;
- Significant energy and mineral resources;
- Significant cave resources;
- Significant paleontological resources.

Areas that Are a High Priority for Disposal

- Parcels which are difficult or costly to administer (manageability and/or isolation of the parcel);
- Parcels more suitable for management by another Federal or State agency;
- Parcels of special importance to (and generally adjacent to) local communities for purposes including, but not limited to, community expansion, extended community services, or economic development.

Other Issues to be Considered Prior to any Land Tenure Adjustment Action

- To what extent the individual action will help achieve overall land ownership management objectives at the watershed level, in cooperation with State and private landowners;
- Existing legal accessibility of the land for public uses;
- Amount of public investments in facilities or improvements and the potential for recovering those investments;
- Consistency with cooperative agreements and plans or policies of other agencies.

Appendix 2 - Part A:
Critical Elements of the Human Environment

Air Quality	The Clean Air Act of 1955, as amended
Areas of Critical Environmental Concern	Federal Land Policy and Management Act of 1976
Cultural Resources	National Historic Preservation Act of 1966, as amended
Environmental Justice	Executive Order 12898
Farm Lands (Prime or Unique)	Surface Mining Control and Reclamation Act of 1977
Floodplain	Executive Order 11988, as amended
Native American Religious Concerns	American Indian Religious Freedom Act of 1978
Threatened or Endangered Species	Endangered Species Act of 1973, as amended
Wastes, Hazardous or Solid	Resource Conservation and Recovery Act of 1976, and Comprehensive Environmental Response, Compensation, and Liability Act of 1980
Water Quality, Drinking or Ground	Safe Drinking Water Act of 1974, as amended and Clean Water Act of 1977
Wetlands/Riparian Zones	Executive Order 11990
Wild and Scenic Rivers	Wild and Scenic Rivers Act of 1968, as amended
Wilderness	Federal Land Policy and Management Act of 1976 and Wilderness Act of 1964

Appendix 2 - Part B
Summary Analysis of "No Impact" or "Minimal Impact" for Select Elements of the Human Environment

Air Quality: There is slight potential for parcels that are transferred from public ownership to temporarily degrade air quality periodically once construction or development begins. Anticipated soil disturbance from these activities is a potential source of fugitive dust and other air pollutants. However, the disturbed areas would be in scattered locations and at different times. There would be temporary increases in fugitive dust and other emissions, but the increases are not anticipated to be large enough to affect air quality on a regional basis. Any proposed land tenure adjustment action would be analyzed prior to the disposal being approved, and site-specific air quality impacts (if any) would be disclosed.

Floodplains/Wetlands/Riparian Areas: Both BLM policy and Executive Orders 11990 and 11988 guide BLM management of floodplains, wetlands, and riparian zones. Based on these sources, BLM Manual 1737.45C establishes four criteria, all of which must be met before any riparian or wetland area can be conveyed to a non-Federal party:

1. The tract of public wetlands is either so small or remote that is uneconomical to manage.
2. The tract of public wetlands is not suitable for management by any other agency.
3. The patent contains restrictions of uses as prohibited by identified Federal, State, or local wetland regulations.
4. The patent contains restrictions and conditions that ensure the payee can maintain, restore, and protect the wetland on a continuous basis.

The last criterion in particular ensures that any riparian tract leaving Federal ownership will remain undeveloped and retain its riparian character. (Please note, the definitions for wetland and riparian are essentially identical.) A site-specific analysis would be conducted on all proposed land tenure adjustments or other lands actions and for all projects proposed to be implemented in an existing or proposed ACEC. That analysis would ensure that all four of the cited criteria are met. Thus, the proposed amendments would have no adverse effect on floodplains, wetlands, or riparian areas. [**Note:** Beneficial effects to riparian areas that would result from the proposed land tenure and ACEC amendment actions are described in the Environmental Impacts chapter of this document.]

Prime/Unique Farm Lands: Existing policies mandated by the Surface Mining Control and Reclamation Act of 1977 require the consideration of prime or unique farm lands. There are no known prime or unique farm lands that could be impacted by either the land tenure or ACEC portions of the proposed amendments.

Environmental Justice: The proposed amendments are not anticipated to result in any potential action that would result in the disproportion of impacts on minority or disadvantaged groups or people.

Wastes, Hazardous or Solid: The proposed amendments are not anticipated to result in any potential action that would result in the generation of hazardous or solid wastes or interfere with management of such wastes under applicable Federal or State laws. In addition, inventories for these materials would be conducted prior to any land tenure adjustment, and mitigation would be required (if possible) or the site would be precluded from land tenure adjustment.

Other Special Designations (National Monument, Wilderness, National Recreation Trails): The land use plan amendments would not apply to the portion of the Craters of the Moon National Monument within the Shoshone Field Office area; thus, there would be no impact to the National Monument. The Shoshone Field Office does not have any designated Wilderness Areas; thus those resources are not affected by the proposed action. The two National Recreation Trails managed by the Shoshone Field Office (Big Wood River National Recreation Trail and Bald Mountain National Recreation Trail) do not have any inholdings or potential for acquisition at either end of the Trails' passage through the Field Office area; thus, the proposed criteria for land tenure adjustment would have no effect on these trails.

Appendix 3
Evaluation of Nominated ACECs

To be considered as a potential ACEC and analyzed in Resource Management Plan alternatives, an area must meet the criteria of relevance and importance established and defined in 43 CFR 1610.7-2. These criteria are further explained in BLM Manual Section 1613.1. The following notations apply to each ACEC "Criteria Review Checklist" in this Appendix:

[1] **Relevance** - An area meets the "relevance" criterion if it contains one or more of the following: a significant historic, cultural, or scenic value (including, but not limited to, rare or sensitive archeological resources and religious or cultural resources important to Native Americans); a fish or wildlife resource (including, but not limited to, habitat for endangered, sensitive, or threatened species, or habitat essential for maintaining species diversity); a natural process or system (including, but not limited to, endangered, threatened, or sensitive plant species; rare, endemic, or relic plants or plant communities which are terrestrial, aquatic, or riparian; or rare geological features; for the purposes of these amendments, an example of a process is cave formation, and an example of a system is a functioning cave environment or riparian area); or a natural hazard (including, but not limited to, areas of avalanche, dangerous flooding, landslides, unstable soils, seismic activity, or dangerous cliffs).

Yes - The area contains the value, resource, process, system, or hazard.

No - The area does not contain the value, resource, process, system, or hazard.

[2] **Importance** - The value, resource, system, process, or hazard must have substantial significance and values in order to satisfy the "importance" criterion. This generally means that the value, resource, system, process, or hazard is characterized by one or more of the following: (1) Has more than locally significant qualities which give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; (2) Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) Has been recognized as warranting protection in order to satisfy National priority concerns or to carry out the mandates of FLPMA; (4) Has qualities which warrant highlighting in order to satisfy public or management concerns about safety and public welfare; (5) Poses a significant threat to human life and safety or to property.

Yes - The value, resource, system, process, or hazard has substantial significance and values and meets one or more of the importance factors listed above.

No - The area contains the value, resource, system, process, or hazard, but the value, resource, system, process, or hazard is not substantially significant and does not meet the importance factors listed above.

N/A - The value, resource, system, process, or hazard is not found within the area.

[3] **Bibliographical information:**

Quigley, T.M. and S.J. Arbelbide (Tech. Eds.). 1997. *An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins: Volume 2.* General Technical Report PNW-GTR-405. USDA, Forest Service, Pacific Northwest Research Station, Portland, OR. pp. 620-624.

[4] **Research Natural Area**

The BLM's Land Use Planning Handbook provides for Research Natural Areas to be designated as types of ACECs using the ACEC designation process (H-1601-1, Appendix C, page 18). A research natural area is an area which contains natural resource values of scientific interest and is managed primarily for research and educational purposes.

[5] **Visual Resource Management (VRM) Classes**

Class I - The objective of this class is to maintain a landscape setting that appears unaltered by humans. Natural ecological changes and very limited management activity are allowed. Any contrast created within the characteristic landscape must not attract attention. It is applied to wilderness areas, some natural areas, wild portions of Wild and Scenic Rivers, and other similar situations where management activities are restricted.

Class II - The objective of this class is to design proposed alterations so as to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class III - The objective of this class is to design proposed alterations so as to partially retain the existing character of the landscape. Contrasts to the basic elements (form, line, color, and texture) caused by a management activity may be evident and begin to attract attention in the characteristic landscape. However, the change should remain subordinate to the existing characteristic landscape.

Class IV - The objective of this class is to provide for management activities which require major modification of the existing character of the landscape. Contrasts may attract attention and be a dominant feature of the landscape in terms of scale; however, the change should repeat the basic elements (form, line, color, and texture) inherent in the characteristic landscape.

[6] **Off-highway Vehicle (OHV) Use Designations**

Open: Motorized vehicle is permitted yearlong anywhere within an area designation as "open" to OHV use, if the vehicle is operated responsibly.

Limited: Motorized vehicle travel within specified areas and/or on designated routes, road, vehicle ways, or trails is subject to restrictions.

Closed: Motorized vehicle travel is prohibited in the area. Access by means other than motorized vehicle is permitted. Vehicle use may be allowed for certain reasons; however, such use shall be made only with the approval of the authorized officer.

Exceptions for Off-road Use:
Off-road vehicle use (cross-country use) would be allowed within areas with a "closed" or "limited" off-highway vehicle use designation under these circumstances: (a) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (b) any vehicle whose use is expressly authorized by the authorized officer or otherwise officially approved; (c) vehicles in official use (43 CFR 8340.0-7); (d) vehicles being used by members or representatives of the Shoshone-Bannock Tribes or Shoshone-Paiute Tribes to access traditional use areas of importance to the Tribes; and (e) vehicles being used by members of the Shoshone-Bannock Tribes to exercise their tribally reserved treaty rights.

BENNETT HILLS ACEC - CRITERIA REVIEW CHECKLIST

Nominated ACEC: Bennett Hills - 381,471 acres

Nominated By: Committee for Idaho's High Desert

Location: See Map 5.

***Relevance**:* Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: The nominated Bennett Hills ACEC encompasses the nominated Coyote Hills ACEC (see pp. 145-146 and Map 8), which contains more than 100 sites with pictographs and petroglyphs that represent anthropomorphs, abstract geometric designs, and the occasional horse and rider. Sites in the Coyote Hills ACEC area may also include tools and artifacts useful in determining the age of the sites and their relationship to each other. While ethnographers mention that many people traveled north from the Snake River in summer to gather yampa and camas bulbs on the Camas Prairie, they make few references to the Bennett Hills. However, these uplands had to be traversed in the spring and then again in late summer. Camas was reportedly gathered in great quantities on the prairie and preserved for winter, and as much as possible was transported to the Snake River and stored in rocks in the canyon walls. Steward's only reference to the Bennett Hills states that groups would gather chokecherries in the "hills south of Camas Prairie" before returning to the Snake River for the fall salmon runs (Steward 1938). Yet reconnaissance surveys have revealed high densities of prehistoric sites in the region. Documented prehistoric sites include rockshelters, overhangs, extensive petroglyph panels, lithic scatters, and hunting blinds. Unfortunately, no formal excavations have been performed at these sites and the BLM currently has little knowledge regarding the types of subsistence activities that occurred in this upland zone. Much of this is due to the extensive looting of rockshelters and overhangs that may have contained valuable clues.	Yes
Scenic: The area has a variety of scenic values, especially along the Sawtooth Scenic Highway (portions of U.S. Highway 75).	Yes

***Relevance** (continued):* Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Fish or Wildlife Resource: The nominated Bennett Hills ACEC encompasses the nominated King Hill Creek ACEC (see pp.158-161 and Map 12), which has significant fisheries and wildlife values. Genetically pure interior redband trout (a USFWS species of concern and Idaho priority species) are documented to occur in the nominated reach of King Hill Creek (Williams et. al., 1991). Mountain quail (also a USFWS species of concern and Idaho priority species) historically utilized this stream reach (with the latest confirmed presence in the late 1970's (Smith, 2001, personal communication)). In addition to the values present in the King Hill Creek area, the nominated Bennett Hills ACEC area has habitat for and populations of sage grouse, a BLM sensitive species, with 125 active and historic leks and both summer and winter habitat. The area has been recognized by the BLM and Idaho Department of Fish and Game (IDFG) as sage grouse source habitat and is considered a stronghold for sage grouse. The nominated Bennett Hills ACEC area may contain populations of mountain quail (although the only confirmed sighting was in the King Hill Creek area in the late 1970's) and does contain habitat that meets the basic requirements for possible future reintroduction. The existing land use plan (Bennett Hills/Timmerman Hills MFP) provides for management of the habitat should mountain quail be confirmed in the area or reintroduced.	Yes
Natural Process or System: The natural system in the nominated Bennett Hills ACEC area is classified as cool shrub, with most of the area (usually above 5,000 feet) in mountain big sagebrush and lower elevation areas in Wyoming big sagebrush. The drier big sagebrush types (Wyoming and Basin) used to be widespread and common. However, due to factors leading to degradation and higher fire frequencies, good examples of these types are becoming increasingly difficult to find and are highly valuable as reference areas to assist resource professionals in understanding their ecology and restoring disturbed areas. Therefore, protection of high-quality examples of these types should always be a management priority. The Bennett Hills also contain mosaics of other shrubs with the big sagebrush communities, including low sagebrush (*Artemisia arbuscula*) and early low sagebrush (*Artemisia longiloba*). This mosaic is important from the perspective of providing high quality habitat for sage grouse. Although native vegetation in much of the nominated area is relatively intact, substantial areas have been disturbed during the past 100+ years (since Europeans settled the area). Changes to the natural disturbance regime such as heavy livestock grazing, fire suppression, and introduction of highly competitive exotic annual grasses (cheatgrass and medusahead) and exotic perennial grasses (crested wheatgrass) have changed the natural ecological succession process. For example, invasion of exotic annual grasses has increased fire frequency in some areas and fire suppression has reduced fire frequency in other areas. In the Wyoming and basin big sagebrush areas at lower elevations, the invasion of exotic annual grasses has led to an increased fire frequency (some areas as often as 5 years), has removed the sagebrush from the system, and will require rehabilitation to restore the functions and processes.[3] *However, rehabilitation and the allowance of fire within the Bennett Hills area will allow ecological processes to function closer to historic levels.*[3] The Bennett Hills support a number of special status plant species that may be locally abundant, but are highly endemic or restricted in distribution due to soil or other habitat requirements. This concentration of special status species, which are often indicative of high-quality vegetation communities, is somewhat unique and should be considered significant from a landscape perspective.	Yes

***Relevance** (continued):* Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	**[1]Yes or No**
Natural Hazard: No known significant natural hazards occur in the nominated area.	No
Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	**[2]Yes/ No** or **N/A**
Historic:	N/A
Cultural: The nominated Bennett Hills ACEC, which includes the nominated Coyote Hills ACEC, contains irreplaceable cultural resources that are extremely fragile and subject to vandalism and illegal excavation. Numerous sites have already been severely damaged by looting activities. The unusual concentration of sites indicates a special significance to aboriginal populations that stopped here along their cyclical travels to and from the Camas Prairie.	Yes
Scenic: The scenery within the nominated area is not unique or of more than local significance. There is also no significant threat to the scenic qualities that would warrant an ACEC designation of the entire Bennett Hills area.	No
Fish or Wildlife Resource: The nominated area has one *very* small portion (King Hill Creek - approximately 2,880 acres, or *less than one percent of the area*) that contains a significantly important fisheries resource (see the nominated King Hill Creek ACEC, pp. 158-161 and Map 12). This fisheries resource is localized and is not a significantly important value *when considered in the context of a designation that would apply to the entire Bennett Hills area*. A smaller ACEC is being proposed in these plan amendments (Alternatives 2, 3, and 4) to provide protective management for the King Hill Creek area. Sage grouse are found throughout the Bennett Hills, and the area provides source sage grouse habitat and probably contains one or more strongholds. The area's existing land use plan (Bennett Hills/Timmerman Hills MFP) recognized these habitat values and already provides for the management and protection of sage grouse habitat as a high priority; simply designating an ACEC (for sage grouse values) would not increase the level of concern for or management of this species. The King Hill Creek portion of the nominated area historically (late 1970's) contained the eastern-most population of mountain quail documented in Idaho. However, a more recent (1989) statewide survey of mountain quail by the Idaho Department of Fish and Game did not report any mountain quail sightings in the nominated ACEC area (Robertson, 1989). *Since the nominated ACEC area contains only a small portion of the entire sage grouse and mountain quail habitat in the West, the area is more of local importance than of regional or national importance.*	No

***Importance** (continued)*: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Natural Process or System: The identified natural system is not vulnerable to adverse change (Importance Factor #2) under existing management. The existing land use plan for the nominated ACEC area (Bennett Hills/Timmerman Hills MFP) contains specific direction to protect and improve the native vegetation in the Bennett Hills area in order to attain and maintain good range condition, provide food and cover for specified wildlife species and a diversity of wildlife, and protect/conserve threatened or endangered plant species. Current fire management direction is for full fire suppression, especially for the protection of sage grouse "strongholds." Fire rehabilitation uses native species where it is appropriate and the rehabilitation would have a high likelihood of success. An extensive noxious weed control program has already been implemented in the Bennett Hills. This management has protected and will continue to protect the cool shrub vegetation system and corresponding habitat for known special status plant species.	No
Natural Hazard:	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the area as an ACEC (under Alternative 2 only) is as follows:

The nominated ACEC area (approximately 381,471 acres) meets relevance and importance criteria through the presence of significant cultural values. [**Note:** The Bennett Hills ACEC designation would include lands managed by the Shoshone Field Office (1,660 acres) as well as public lands along King Hill Creek that are managed by the Four Rivers Field Office, Lower Snake River District - BLM (1,220 acres). The ACEC designation would amend both the Bennett Hills/Timmerman Hills MFP and the Jarbidge RMP. Some portions of the Bennett Hills ACEC would have overlapping designations. All or part of the following Wilderness Study Areas lie within the proposed ACEC's boundaries: King Hill Creek, Deer Creek, Gooding City of Rocks West, Gooding City of Rocks East, Black Canyon, Little City of Rocks, and Black Butte. In addition, the following eligible Wild and Scenic River segments occur within the proposed ACEC area: King Hill Creek and Dry Creek. If, in the future, all or some of these WSAs are released by Congress from wilderness review and/or the creeks are found unsuitable for Wild and Scenic River designation (or not designated by Congress), any Bennett Hills ACEC designation or management action that is implemented through these plan amendments would continue to apply.]

Cultural Values: Significant cultural resources are found throughout the Bennett Hills area, although cultural resources are more densely concentrated in the nominated Coyote Hills ACEC area. These resources are extremely fragile and some have already been damaged by illegal excavation or vandalism. An ACEC designation would highlight the need for protection of these fragile resources.

List the management prescription(s) necessary to maintain and protect each met relevant and important value.

Cultural Values: The proposed management prescription is to (a) protect the cultural resources and associated setting from destruction and loss and (b) allow for professional research. Management actions that would highlight and protect the Bennett Hills ACEC's cultural values include the following:

(a) Develop a Cultural Resource Management Plan which emphasizes National Register District nomination; curation of collections; limitations on any activity that may adversely impact cultural resources; fire

suppression guidelines; annual reporting procedures; physical protection measures; regulatory and/or interpretive signs; law enforcement; erosion control; and site stabilization.

(b) Limit mineral material sales and free use permits to existing sites and public lands adjacent to State Highway 75, State Highway 46, and the Bliss-Hill City Road.

(c) Limit motorized vehicle use to designated and signed roads and trails.[6]

(d) Permitting for professional research will follow the process outlined in BLM Manual 1851 for Cultural Resource Use Permits.

Rationale for not proposing the ACEC for designation under the Preferred Alternative (Alternative 3):

Although the nominated Bennett Hills ACEC meets relevance and importance criteria for cultural values, the BLM does not recommend this potential ACEC for designation under the Preferred Alternative for the following reasons:

- A Cultural Resource Management Plan (activity plan) does not require an ACEC designation or other RMP action to be written and implemented.

- Cultural resources are protected under standard management provisions by law and regulation (e.g., the National Historic Preservation Act of 1966 and the Archeological Resources Protection Act of 1979). ACEC designation is not required to highlight the Bennett Hills area for protective management.

- Highlighting the location of these cultural values through designation may draw increased attention to the resources, thereby increasing the risk of further vandalism and illegal excavation.

BIG WOOD/WARM SPRINGS ACEC - CRITERIA REVIEW CHECKLIST

Nominated ACEC: Big Wood/Warm Springs ACEC - 236 acres

Nominated By: City of Ketchum

Location: See Map 6.

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: No known significant cultural values occur in the nominated area.	No
Scenic: The nominated area is within the viewshed of the Sawtooth Scenic Byway, also known as State Scenic Highway 75.	Yes
Fish or Wildlife Resource: No known significant fish or wildlife resources occur in the nominated area.	No
Natural System or Process: No known significant natural systems or processes occur in the nominated area.	No
Natural Hazard: No known significant natural hazards occur in the nominated area.	No
Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Historic:	N/A
Cultural:	N/A
Scenic: Although very important to the local residents, the scenic qualities of this parcel are not unique, being fairly typical of views in the area, and do not appear to rise to the level of regional or national importance. The nominated area lies at lower elevations along the Wood River and at the base of Bald Mountain; motorists using the Sawtooth Scenic Highway are attracted to the visual resources at elevations above the nominated area (i.e., Bald Mountain Ski Area).	No
Fish or Wildlife Resource:	N/A
Natural System or Process:	N/A
Natural Hazard:	N/A

The nominated ACEC meets the relevance, but not the importance criteria, to be considered as a potential ACEC.

The BLM's rationale for not proposing the nominated Big Wood/Warms Springs ACEC for designation is as follows:

The scenic value meets the relevance, but not the importance, criteria. Although the nominated area is doubtless important to the local residents, it is not significant regionally or nationally for its scenic quality. In addition, designation as an ACEC is not necessary in order to preserve the scenic quality of this parcel for nearby residents or visitors. The scenic values are not in jeopardy under current planning direction and management. The area is already managed according to Visual Resource Inventory Class II, where the direction is to retain the existing character of the landscape. (In VRI Class II areas the level of change should be low. Management activities can be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant features of the landscape.) The existing land use plan's direction for the area is for Environmental Education purposes, for disposal to the Forest Service, and closed to motorized vehicle use (Sun Valley MFP 1981); each of these land uses is compatible with retaining the existing scenic character.

List the management prescription(s) necessary to maintain and protect <u>each</u> relevant and important value.

Not applicable, since the nominated area does not meet relevance and importance criteria for potential designation.

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CAMAS CREEK ACEC/RNA - CRITERIA REVIEW CHECKLIST

Nominated ACEC: Camas Creek - 420 acres, including 1.5 miles of stream reaches

Nominated By: BLM, in response to recommendations made by the Idaho Natural Areas Coordinating Committee

Location: See Map 7.

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: No known significant cultural values occur in the nominated area.	No
Scenic: Sheer canyon walls protect a functioning riparian zone within a sagebrush steppe ecosystem.	Yes
Fish or Wildlife Resource: Native redband trout, an Idaho priority species of special concern and a USFWS species of special concern, are becoming increasingly rare throughout their historic habitat range due to hybridization with introduced species (e.g., rainbow trout) and loss or degradation of their habitat. Native redband trout were reported to occur in Camas Creek (Williams, 1997). However, the IDFG has not confirmed the species' presence in Camas Creek (Partridge, 2001, personal communication). Because Camas Creek flows directly into Magic Reservoir, which is regularly stocked with hatchery rainbow trout, it is doubtful that *native* redband trout would occur in Camas Creek; any redbands found in Camas Creek would likely be hybridized with hatchery trout. [**Note:** If native redband trout are confirmed to be in Camas Creek in the future, the BLM is mandated by policy (BLM Manual Section 6840) to manage the habitat to protect the special status fisheries resource, even if the creek is not designated as an ACEC based on fisheries resource values. In addition, managing the creek to protect the riparian system will benefit the fisheries habitat.]	No
Natural System or Process: The riparian zone supports two distinct riparian communities and the adjacent uplands support an additional three terrestrial plant communities. The confluence of Camas Creek with Willow Creek supports a dense community of native cottonwoods. Additionally, the nominated area and adjacent areas are known to support camas milkvetch and bugleg goldenweed, both Idaho state sensitive species and species of concern to the USFWS, but without formal federal status.	Yes
Natural Hazard: No known significant natural hazards occur in the nominated area.	No
Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Historic:	N/A

***Importance** (continued):* Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Cultural:	N/A
Scenic: The nominated reach of Camas Creek is unique in that it not only has visual and resource values seldom seen in southern Idaho, but it is also available for viewing by the public (from the rim) with easy access from U.S. Highway 20. However, this very access places the reach at risk without careful management and public education.	Yes
Fish or Wildlife Resource:	N/A
Natural Process or System: Undisturbed riparian areas are increasingly rare throughout the Snake River Plains. Camas Creek is a reference area that thus far has been protected from casual use and development by its sheer and/or boulder-strewn canyon walls. It is important to preserve these areas as a control for research and as a reference area for describing potential natural communities.	Yes
Natural Hazard:	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Camas Creek ACEC for designation (under Alternative 2) as an ACEC/RNA is as follows:

The nominated ACEC meets relevance and importance criteria for scenic values and a natural (riparian) system. Overall, the unique scenic nature of this reach of Camas Creek, its inherent value as a riparian reference area, and its value as an example of an ecosystem supporting rare plants found only in this part of Idaho combine to establish the relevance and importance of Camas Creek as an ACEC and Research Natural Area (RNA).[4]

Scenic Values - Although several riparian/canyon environments exist within the Bennett Hills, this is the only one that is immediately accessible to the general public from a major highway. Its scenic value could easily entice both local and out-of-state visitors on their way to Sun Valley, the Sawtooth Mountains, and Craters of the Moon National Monument. Its accessibility also puts those same scenic values at risk, unless special management and public education actions are implemented.

Natural (Riparian) System - Low elevation riparian reference areas are exceedingly rare in southern Idaho and throughout the Snake River Plains. Camas Creek is one of a few examples of just such an area. While riparian areas are resilient to a point, after their native species are lost they may never be fully restored. Under the ever-increasing pressures of multiple uses, riparian areas become fragile systems that may require special management attention. Designating Camas Creek as an ACEC/RNA would preserve its integrity for use as a riparian reference area and control for scientific research and to provide the BLM a reference area against which to measure management success or failure in riparian areas with similar potential. The presence of two rare upland species of plants also contributes to the importance of this area as an example of a terrestrial ecosystem in southern Idaho.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

Scenic Values:

(a) Designate and manage the ACEC as VRM Class II.[5]
(b) **Note:** Many of the actions listed under "Natural System or Process" below would also help protect the unique scenic values in the nominated area.

Natural System or Process: The primary purpose for designating this reach of Camas Creek as an ACEC/RNA is because of its importance as a riparian reference area in southern Idaho and the Snake River Plains. The following actions would highlight and protect the Camas Creek riparian area. They would also have the indirect effect of protecting the identified scenic values.

(a) Work with adjacent private landowners on coordinated riparian management.
(b) Acquire private sections of the stream under a willing-seller basis or through exchange. Explore opportunities for conservation easements.
(c) Close the ACEC to livestock grazing, except for sheep trailing (no overnight stays) within the wing fences of Macon Sheep Bridge. Wing fences will be built at the Macon Sheep Bridge to allow for sheep trailing through the Camas Creek area. Temporary management to prevent sheep grazing impacts will be required until the fences are built.
(d) Implement actions to re-establish the potential natural community along the entire reach.
(e) Seek to eliminate non-native invasive plant species.
(f) Exclude the ACEC from new land use authorizations (e.g., rights-of-way, R&PP Act leases, land use permits).
(g) Stipulate the ACEC no-surface-occupancy for leasable mineral exploration and development, including seismic exploration. Close the ACEC to mineral material sales and free use permits.
(h) Limit motorized vehicle use to designated and signed roads and trails.[6]
(i) Develop a visitor information station/kiosk (and possibly a small picnic area) in the parking area overlooking the canyon (at the end of the county line road) to provide public awareness of the nature and fragility of the area and constrain casual use to that immediate area (rather than allowing such use to occur along the entire rim).

Rationale for not proposing the ACEC for designation under the Preferred Alternative (Alternative 3):

Although the nominated Camas Creek ACEC meets relevance and importance criteria for scenic values and a natural (riparian) system, the BLM does not recommend this potential ACEC for designation under the Preferred Alternative for the following reasons:

Scenic Values: The identified scenic values include the area's sheer canyon walls and the functioning riparian zone. These scenic values are not in jeopardy under current planning guidance and management; no additional special management is needed to protect the scenic values. Highlighting the scenic resources through ACEC designation and the proposed management prescription (e.g., constructing a visitor station/kiosk and parking area) may, in fact, increase the risk of resource degradation.

Natural System or Process: Camas Creek's riparian zone was identified as a relevant and important natural system. This riparian system is unique in a desert environment. However, this system is not in jeopardy under existing management. The sheer canyon walls form a natural barrier to many forms of disturbance that may otherwise occur in a riparian area (e.g., extensive livestock grazing), and existing management tools (such as implementing rangeland standards and guidelines) are sufficient to maintain and improve riparian conditions.

COYOTE HILLS ACEC - CRITERIA REVIEW CHECKLIST

Nominated ACEC: Coyote Hills - 49,062 acres

Nominated By: BLM

Location: See Map 8.

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: The nominated area contains more than 100 sites with pictographs and petroglyphs that represent anthropomorphs, abstract geometric designs, and the occasional horse and rider. Sites may also include tools and artifacts useful in determining the age of the sites and their relationship to each other.	Yes
Scenic: No known significant scenic values occur in the nominated area.	No
Fish or Wildlife Resource: No known significant fish or wildlife resources occur in the nominated area.	No
Natural System or Process: No known significant natural systems or processes occur in the nominated area.	No
Natural Hazard: No known significant natural hazards occur in the nominated area.	No
Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Historic:	N/A
Cultural: The identified cultural values are irreplaceable resources that are extremely fragile and subject to vandalism and illegal excavation. Numerous sites have already been severely damaged by looting activities. The unusual concentration of sites indicates a special significance to aboriginal populations that stopped here along their cyclical travels to and from the Camas Prairie.	Yes
Scenic:	N/A
Fish or Wildlife Resource:	N/A
Natural System or Process:	N/A
Natural Hazard:	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as an ACEC. The rationale for proposing the area as an ACEC (under Alternative 2) is as follows:

The nature and concentration of archaeological sites and rock art in the nominated areas indicates a unique affinity for this area by native aboriginal populations. The fragility of the sites suggests the need for special management to protect them

from looting and vandalism. Statistically, many sites within the nominated area remain undiscovered and/or uninterpreted. The Bennett Hills/Timmerman Hills MFP made a general statement about the potential National Register eligibility of the Little City of Rocks cultural resources.

Note: The eastern portion of the nominated Coyote Hills ACEC would have an overlapping designation, as this section lies entirely within the Black Rock and Little City of Rocks Wilderness Study Areas (WSAs). If either or both of the WSAs are released by Congress from wilderness review in the future, any Coyote Hills ACEC designation or management action that is implemented through these plan amendments would continue to apply.

List the management prescription(s) necessary to maintain and protect each relevant and important value.

The proposed management prescription is to (a) protect the cultural resources and associated setting from destruction and loss and (b) allow for professional research . Management actions that would highlight and protect the Coyote Hills ACEC's cultural values include the following:

(a) Develop a Cultural Resource Management Plan which emphasizes National Register District nomination; curation of collections; limitations on any activity that may adversely impact cultural resources; fire suppression guidelines; annual reporting procedures; physical protection measures; regulatory and/or interpretive signs; law enforcement; erosion control; and site stabilization.
(b) Limit mineral material sales and free use permits to existing sites and public lands adjacent to the Bliss-Hill City Road and State Highway 46.
(c) Limit motorized vehicle use to designated and signed roads and trails.[6]
(d) Permitting for professional research will follow the process outlined in BLM Manual 1851 for Cultural Resource Use Permits.

Rationale for not proposing the ACEC for designation under the Preferred Alternative (Alternative 3):

Although the nominated Coyote Hills ACEC meets relevance and importance criteria for cultural values, the BLM does not recommend this potential ACEC for designation under the Preferred Alternative for the following reasons:

- A Cultural Resource Management Plan (activity plan) does not require an ACEC designation or other RMP action to be written and implemented.

- Cultural resources are protected under standard management provisions by law and regulation (e.g., the National Historic Preservation Act of 1966 and the Archeological Resources Protection Act of 1979). ACEC designation is not required to highlight the Coyote Hills area for protective management.

- Highlighting the location of these cultural values through designation may draw increased attention to the resources, thereby increasing the risk of further vandalism and illegal excavation.

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DRY CREEK ACEC/RNA - CRITERIA REVIEW CHECKLIST

Nominated ACEC: Dry Creek - 869 acres, including 3.8 miles of stream reaches

Nominated By: BLM, in response to recommendations made by the Idaho Natural Areas Coordinating Committee

Location: See Map 9

***Relevance**:* Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: No known significant cultural values occur in the nominated area.	No
Scenic: Dry Creek exhibits high visual quality because it is not easily accessible and therefore has received limited human disturbance (although there is nothing preventing a visitor from hiking to the creek from either the north or south, and one can drive very close to the southern access point). The local scenic values are worthy of recognition, in that it is unusual to see such a well-developed native riparian area in a desert environment. Dry Creek is identified as an eligible Wild and Scenic River (tentative classification of "wild") based on its outstandingly remarkable scenic, ecological, and recreational values (USDI - BLM 1994). This section of Dry Creek also lies within the Gooding City of Rocks East WSA, which is managed to prevent impairment of wilderness values (such as existing attributes of naturalness).	Yes
Fish or Wildlife Resource: Personal communications with Fred Partridge (lead fish biologist for IDFG in Jerome, Idaho) indicate that Interior redband trout, a BLM sensitive species and an Idaho priority species of special concern, have been verified in Dry Creek four miles downstream from the nominated reach (Partridge, 2001). However, the nominated reach is isolated from the confirmed population by a waterfall, and no redband trout have been confirmed in the nominated reach (Partridge, 2001). No fish can enter (or leave) through the north end of the nominated reach because of high water temperatures (a hot springs flows into the creek). Because no hatchery trout have been released into this segment, any redband trout occurring there could be assumed to be native (genetically pure) (Partridge, 2001). However, Williams, et.al. (1991) sampled 30 sites along Dry Creek and determined that redband trout populations in the creek are not genetically pure, but rather show some evidence of hybridization with hatchery rainbow trout. Even though the nominated segment is isolated due to geologic features, the stream habitat would not be suitable for native redband trout reintroduction unless it can be confirmed that no hybridized fish inhabit the reach. Because there is no confirmed presence of native redband trout in the nominated reach, and studies of redband populations in Dry Creek indicate some level of hybridization, the BLM does not find the fisheries resource to be a relevant value for ACEC designation. [**Note:** If native redband trout are confirmed to be in Dry Creek in the future, the BLM is mandated by policy (BLM Manual Section 6840) to manage the habitat to protect the special status fisheries resource, even if the creek is not designated as an ACEC based on fisheries resource values. In addition, managing the creek to protect the riparian system will benefit the fisheries habitat. The Shoshone Field Office has proposed a more significant stream (King Hill Creek) for ACEC designation in order to highlight protective management of the genetically pure Interior redband trout in that stream.] [continued]	No

***Relevance** (continued):* Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Fish or Wildlife Resource (continued): Mountain quail, a BLM sensitive species, is thought to have occurred in the Dry Creek drainage in the late 1970's. However, no confirmed sightings of the quail have been made during the past two decades (Smith, 2001) and a 1989 survey did not find quail to be present in the nominated area (Robertson, 1989). The nominated area's mountain quail habitat may be suitable for reintroduction of the quail. However, this area is within an estimated 10 miles of the eastern periphery of an extensive habitat range and has minimal significance on a regional level.	No
Natural Process or System: Dry Creek supports a near-pristine, fully functional, low elevation riparian system. The creek was identified as an eligible Wild and Scenic River (tentative classification of "wild") with outstandingly remarkable ecological values (BLM 1994).	Yes
Natural Hazard: No known significant natural hazards occur in the nominated area.	No
Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Historic:	N/A
Cultural:	N/A
Scenic: The nominated reach of Dry Creek is unique in that it has visual and resource values seldom seen in southern Idaho. Because the area is difficult to access, the riparian area has been preserved in a near-pristine condition. The creek has regional (and possibly national) importance because it is eligible for further study as a Wild and Scenic River (based, in part, on outstandingly remarkable scenic values) and is contained within a Wilderness Study Area.	Yes
Fish or Wildlife Resource:	N/A
Natural Process or System: Pristine low elevation riparian areas are rare throughout the Inter-mountain West and are especially valuable as reference areas. Dry Creek is identified as an eligible Wild and Scenic River based, in part, on its outstandingly remarkable ecological values.	Yes
Natural Hazard:	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as an ACEC. The rationale for proposing the area for ACEC/RNA designation (under Alternative 2) is as follows:

The nominated area meets relevance and importance criteria for scenic values and a natural (riparian) system.

Scenic Values: The local scenic values are worthy of recognition, in that it is unusual to see such a well-developed native riparian area in a desert environment. These scenic values were recognized as "outstandingly remarkable" in the BLM's Wild and Scenic Rivers eligibility evaluation (USDI - BLM 1994). An ACEC designation would highlight the need to protect and manage those visual resources.

Natural (Riparian) System: Low elevation riparian reference areas are exceedingly rare in southern Idaho and throughout the Snake River Plains. Dry Creek is one of the few examples of just such an area. While riparian areas are

resilient to a point, after their native species are lost, they may never be fully restored. Under the ever-increasing pressures of multiple uses, riparian areas become fragile systems that require special management attention. Designation as an ACEC/RNA[4] is proposed for Dry Creek in order to preserve its integrity for use as a riparian reference area and control for scientific research and to provide the BLM a reference area against which to measure management success or failure in riparian areas with similar potential.

Note: The Dry Creek ACEC/RNA would have overlapping designations, as the entire nominated area lies within the Gooding City of Rocks East WSA and has been found eligible for further study for inclusion in the nationwide Wild and Scenic Rivers system. If, in the future, the WSA is released by Congress from wilderness review and/or the creek segment is found unsuitable for Wild and Scenic River designation (or not designated by Congress), any Dry Creek ACEC/RNA designation or management action that is implemented through these plan amendments would continue to apply.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescription(s) necessary to protect those values.

Management actions that would highlight and protect the Dry Creek ACEC/RNA's scenic values and natural (riparian) system include the following:

Scenic Values:

(a) Designate the ACEC as VRM Class I.[5]
(b) **Note:** Many of the actions listed under "Natural (Riparian) System" below would also help protect the nominated area's unique scenic values.

Natural (Riparian) System: Specific actions to highlight management and protection of the riparian vegetation and watershed integrity in the Dry Creek ACEC/RNA include the following:

(a) Close the area to livestock grazing.
(b) Prevent noxious weed invasion by treating public lands adjacent to the ACEC and promptly treating existing and new weed infestations within the ACEC.
(c) Close the ACEC to mineral material sales and free use permits.
(d) Designate the ACEC/RNA as "closed" to motorized vehicle use.[6]
(e) Do not allow new land use authorizations (e.g., rights of way, R&PP Act leases, land use permits).
(f) Designate and manage the ACEC/RNA as VRM Class 1.
(g) Only allow those vegetation manipulation or surface disturbing activities that will protect or enhance the near-pristine low elevation riparian plant community and/or the adjacent late seral upland plant communities.

Rationale for not proposing the ACEC/RNA for designation under the Preferred Alternative (Alternative 3):

Although the nominated Dry Creek ACEC meets relevance and importance criteria for scenic values and a natural (riparian) system, the BLM does not recommend this potential ACEC for designation under the Preferred Alternative for the following reasons:

Scenic Values: The nominated ACEC's scenic values (the contrast between the riparian zone and surrounding desert environment) are not in jeopardy under current planning guidance and management, especially since the nominated area lies within a Wilderness Study Area and has also been found eligible for further study as a Wild and Scenic River. Eligible Wild and Scenic Rivers and designated Wilderness Study Areas shall be managed to protect the values which resulted in the river segment's eligibility determination and the WSA's designation. In the case of the Dry Creek ACEC area, this includes scenic resources. Because of the WSA designation, the area is under VRM Class I guidelines, where the objective is to maintain a landscape setting that appears unaltered by humans.

Natural (Riparian) System: Dry Creek's near-pristine riparian zone was identified as a relevant and important natural system. Although this riparian system is unique in a desert environment, it is a functioning riparian zone under current planning guidance and management. In addition, the sheer canyon walls form a natural barrier to many forms of disturbance that may otherwise occur in a riparian area (e.g., extensive livestock grazing or unauthorized off-highway vehicle use). No additional management attention in the form of ACEC designation is needed to protect the riparian area.

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FIR GROVE ACEC - CRITERIA REVIEW CHECKLIST

Nominated ACEC: Fir Grove - 45 acres

Nominated By: The Nature Conservancy

Location: See Map 10

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: No known significant cultural values occur in the nominated area.	No
Scenic: No known significant scenic values occur in the nominated area.	No
Fish or Wildlife Resource: No known significant fish or wildlife resources occur in the nominated area.	No
Natural Process or System: The nominated site contains the only known stand of an isolated Douglas-fir community (*Pseudotsuga menziesii*) south of Camas Creek in the Bennett Hills. Fire appears to be the only threat to this stand, and this risk is mitigated by the fact that (a) the stand lies on a north-facing slope, and (b) the site is identified for full fire suppression in the Shoshone Fire Management Plan. Additionally, Fir Grove is not part of the Upper Snake River District timber base and would therefore not be subject to timber harvest activities. Current management is sufficient to protect the values at this site. The stand is not deemed significant and does not require special management attention.	No
Natural Hazard: No known significant natural hazards occur in the nominated area.	No
Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Historic:	N/A
Cultural:	N/A
Scenic:	N/A
Fish or Wildlife Resource:	N/A
Natural Process or System:	N/A
Natural Hazard:	N/A

The nominated ACEC does not meet the relevance and importance criteria to be considered as a potential ACEC.

No further assessment is required or will be conducted.

KING'S CROWN ACEC - CRITERIA REVIEW CHECKLIST

Nominated ACEC: King's Crown - 20 acres

Nominated By: The Nature Conservancy, Idaho Natural Heritage Program

Location: See Map 11

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: No known significant cultural values occur in the nominated area.	No
Scenic: No known significant scenic values occur in the nominated area.	No
Fish or Wildlife Resource: No known significant fish or wildlife resources occur in the nominated area.	No
Natural Process or System: The area is a prominent mesa in the King Hill area comprised of basaltic lava of the middle Pleistocene Bruneau formation. There is only one place where people can climb unaided onto the mesa. The site contains excellent examples of two undisturbed plant communities (Mosley, 1987). One of these plant communities is rare, while the other is common, although seldom seen in the climax or near climax successional phase found at this site.	Yes
Natural Hazard: No known significant natural hazards occur in the nominated area.	No
Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Historic:	N/A
Cultural:	N/A
Scenic:	N/A
Fish or Wildlife Resource:	N/A
Natural Process or System: The natural system is not vulnerable to adverse change (Importance Factor #2), due to its inaccessibility by humans and livestock. Wildfire is the only known risk to the plant communities, and this risk is mitigated by the natural features of the mesa (which is surrounded by cliffs). If a wildfire occurred in the Kings Crown vicinity, the area is identified for full suppression in the Shoshone Field Office Fire Management Plan.	No
Natural Hazard:	N/A

The nominated ACEC does not meet the relevance and importance criteria to be considered as a potential ACEC.

No further assessment is required or will be conducted.

KING HILL CREEK ACEC/RNA - CRITERIA REVIEW CHECKLIST

Nominated ACEC: King Hill Creek - 2,880 acres, including 10 miles of stream reaches

Nominated By: BLM

Location: See Map 12

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: No known significant cultural values occur in the nominated area.	No
Scenic: King Hill Creek canyon is a vertical walled canyon that in places exceeds 650 feet deep. (Two "Statues of Liberty," including the base, could be stacked on top of each other and not reach out of this canyon!) The stream itself is a thick green strip of vegetation which starkly contrasts with the brown rhyolite and black basalt of the canyon walls. In one location a stand of Douglas-fir rises from the wall of the upper canyon. King Hill Creek has been found eligible for further study as a Wild and Scenic River (tentative classification of "wild") based, in part, on its outstandingly remarkable scenic values (USDI - BLM 1994).	Yes
Fish or Wildlife Resource: *Fish:* Genetically pure native Interior redband trout, a BLM sensitive species and an Idaho priority species, are documented to occur in this reach of King Hill Creek (Partridge, 2001; and Williams, et. al., 1991). *Wildlife:* Mountain quail, also a BLM sensitive species and State priority species, were last documented to occur in this drainage in the late 1970's. However, no confirmed sightings of the quail have been made during the past two decades (Smith, 2001), and a 1989 survey did not find quail to be present in the nominated area (Robertson, 1989). The nominated area's mountain quail habitat is suitable for reintroduction of the quail, if no existing populations can be confirmed. However, this area is within an estimated 25 miles of the eastern periphery of an extensive habitat range and has minimal significance on a regional level.	Yes No
Natural System or Process: King Hill Creek represents a low elevation riparian system, 97% of which is properly functioning and approaching its potential natural community. This site is an important reference area for low elevation riparian systems which occur elsewhere within the Snake River Basin.	Yes
Natural Hazard: No significant natural hazards occur in the nominated area.	No
Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Historic:	N/A

***Importance** (continued):* Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	[2]**Yes/ No** or **N/A**
Cultural:	N/A
Scenic: The isolation and visual quality of the King Hill Creek canyon qualify the area as eligible for further study as a Wild and Scenic River with a tentative classification of "wild," based in part on the stream reach's outstandingly remarkable scenic values (USDI-BLM, 1994). The majority of the nominated ACEC also lies within the King Hill Creek Wilderness Study Area, which is managed to maintain wilderness values such as naturalness. In 1987 King Hill Creek was inventoried as Visual Resource Inventory Class II. Subsequent BLM policy defines all Wilderness Study Areas as Visual Resource Management Class I. (The management difference is that in VRM Class I areas no visible change is acceptable, while in Class II areas visible change may occur, as long as it does not attract attention.) These scenic values are important and appear to reach the level of regional or national importance.	Yes
Fish or Wildlife Resource: *Fish:* The native redband trout found here are genetically pure and may represent an important source of this species for reintroduction into suitable habitats elsewhere (Williams et. al., 1991). *Wildlife:*	Yes N/A
Natural Process or System: Dry Creek (also nominated for ACEC designation) is the only other riparian system in the Shoshone Field Office area that approaches the isolation and pristine condition represented by King Hill Creek. This site is an important reference area for low elevation riparian systems which occur elsewhere within the Snake River Basin.	Yes
Natural Hazard:	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated ACEC for designation as an ACEC/RNA[4] under all action alternatives (Alternatives 2, 3, and 4) is as follows:

The scenic values, fisheries resource, and natural riparian system meet the relevance and importance criteria.

[**Note:** The ACEC designation would include lands managed by the Shoshone Field Office (1,660 acres) as well as public lands managed by the Four Rivers Field Office, Lower Snake River District - BLM (1,220 acres). The ACEC designation would amend both the Bennett Hills/Timmerman Hills MFP and the Jarbidge RMP. All of the ACEC/RNA would have overlapping designations. Most of the ACEC (approximately 80%) would lie within the King Hill Creek Wilderness Study Area (WSA). In addition, the ACEC would include all 10 miles of the King Hill Creek stream segment found eligible for further study as a National Wild and Scenic River. If, in the future, the WSA is released by Congress from wilderness review and/or the creek segment is found unsuitable for Wild and Scenic River designation (or not designated by Congress), any King Hill Creek ACEC/RNA designation or management action that is implemented through these plan amendments would continue to apply.]

Scenic Values: The documented scenic values are more than locally significant. They are currently protected by virtue of the area's designation as a Wilderness Study Area and are, therefore, raised to a level of regional or national

importance. The stream reach was also found eligible for further study for potential addition to the nationwide Wild and Scenic Rivers system based on its outstandingly remarkable scenic values (USDI - BLM 1994).

Fisheries Resources: The presence of genetically pure native Interior redband trout, in and of itself, is sufficient to protect this area with an ACEC designation.

Natural System: The importance of riparian reference areas cannot be over-stressed. Such areas are very rare, and only the relative isolation of this reach of King Hill Creek has protected it from degradation to this point.

Rationale for not proposing the ACEC/RNA for designation under the Preferred Alternative (Alternative 3): Not applicable, since the ACEC is proposed for designation under Alternatives 2, 3, and 4.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescription(s) necessary to protect those values.

In order to preserve King Hill Creek's scenic resources, fisheries habitat, riparian vegetation, and watershed integrity in their pristine state, the BLM proposes the following management actions in addition to ACEC designation:

(a) Close the area to livestock grazing.
(b) Close all aquatic habitat in the King Hill Creek ACEC/RNA to introduction of genetic strains of trout which are not native to the King Hill Creek watershed. Petition the Idaho Department of Fish and Game to prohibit the introduction of genetic strains of trout into King Hill Creek which are not native to the King Hill Creek watershed.
(c) Prevent noxious weed invasion by treating public lands adjacent to the ACEC and promptly treating existing and new weed infestations within the ACEC.
(d) Exclude the ACEC from new land use authorizations (e.g., rights-of-way, R&PP Act leases, land use permits).
(e) Close the ACEC to mineral material sales and free use permits.
(f) Designate the ACEC/RNA as "closed" to motorized vehicle use[6].
(g) Designate the ACEC as VRM Class I[5].
(h) Authorize only those actions which maintain or improve desirable habitat conditions for redband trout.

McKINNEY BUTTE ACEC/RNA - CRITERIA REVIEW CHECKLIST

Nominated ACEC: McKinney Butte - 3,764 acres

Nominated By: BLM

Location: See Map 13

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: The dry, cool environment of Idaho's caves is conducive to the preservation of archaeological materials, and many caves in Idaho show evidence of prehistoric use by aboriginal people, often for shelter or for storage. However, existing data do not support that there was extensive prehistoric use of the caves in the McKinney Butte area. Although cultural resources have been documented in the McKinney Butte area, the integrity of these resources has been severely compromised by years of unauthorized use (e.g. looting). Little remains of the archaeological record for this area.	No
Scenic: The nominated area contains 13 known caves with diverse and beautiful lava tube features. An abundance and variety of geological features, the varying character of passageways, and pristine environments contribute to the outstanding scenery in the caves. Specific features found in area caves include lava extrusions up to six feet tall, lava roses, lava stalactites and stalagmites, lava benches, lava bubbles, remelt features, skylight openings, and seasonal ice formations. Secondary mineral deposits of calcite, opal, gypsum, mirabilite, and iron contribute to the scenic quality found underground.	Yes
Fish or Wildlife Resource: Significant hibernating bat populations of Western small-footed myotis *(Myotis ciliolabrum)* and Townsend's Western big-eared bat (*Corynorhinus townsendii townsendii*), both BLM sensitive species, have been documented in several of the caves since 1987. At least one cave is suspected to be a maternity roost. A biological inventory of selected caves in the nominated ACEC area in 1999 and 2000 found a rich and diverse cave-adapted insect community. The inventory found some relatively widely distributed troglobitic (completing entire life cycle in caves) invertebrates in the caves, in addition to two undescribed species.	Yes
Natural Process or System: The McKinney Butte area and its caves represent the natural process of volcanism and lava tube formation (volcanospeleology). McKinney Butte is one of many volcanic shields from the late Pleistocene flows that cover the northern edge of the Snake River Plain in south central Idaho. These lava tube caves provide protection from outside elements, stable, low temperatures, and constant humidity levels, resulting in ideal conditions for the preservation of fossil remains. In addition, some lava blisters have been found to be carnivore traps, providing a rich accumulation of animal remains. Few paleontological inventories have been completed in the area, but random discoveries and isolated scientific excavations have documented extinct or extirpated species from the Pleistocene through the Holocene epochs in the caves.	Yes
Natural Hazard: All caves can be potentially dangerous to the unprepared visitor. However, the caves in and of themselves are not a natural hazard.	No

Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	**[2]Yes/ No or N/A**
Historic:	N/A
Cultural:	N/A
Scenic: Features found in several caves are unique to Idaho caves in their variety, abundance, and virtually undisturbed condition.	Yes
Fish or Wildlife Resource: Nine of the 13 known caves in the nominated area list biota as one of the values they contain which contributed to their determination as significant caves. The relatively undisturbed nature of caves in the area has helped maintain the highly diverse number of cave-adapted animals. Some of the caves are used as a hibernaculum for significant numbers of Townsend's big-eared bats. Two species of undescribed troglobitic (completing entire life cycle in caves) invertebrates are present in the caves.	Yes
Natural Process or System: Features found in several caves are unique to Idaho caves in their variety, abundance, and virtually undisturbed condition. The area contains caves with multi-level passages, unusual temperature fluctuations, and other features rarely found in lava tube caves. One cave is characterized by an unusual, unclimbable pit entrance leading into a lava tube that begins about fifty feet below the surface. Another cave consists of one large room lit by a skylight with a side entrance passage. The constant cool, damp conditions on the floor of this cave have created a microsite which supports ferns and mosses. This kind of plant community would typically be found farther north in cool, wet forested areas. The plant community may possibly be a remnant from formally cooler times when such vegetation existed farther south in Idaho. The value of paleontologic resources in the central Snake River Plain caves is considered by experts to be significant. The only known fossil records from the central Snake River Plain are from lava tubes and pits. The high potential of finding paleontologic resources in the nominated caves increases their scientific and educational value.	Yes
Natural Hazard:	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as an ACEC. The rationale for proposing the nominated McKinney Butte ACEC for designation as an ACEC/RNA[4] under all action alternatives (Alternatives 2, 3, and 4) is as follows:

The nominated area meets relevance and importance criteria for scenic values, wildlife resources, and natural systems and processes.

Scenic Resources: Cave resources are fragile and easily degraded by intentional and unintentional abuse. A single careless act by a caver can destroy or degrade formations and mineral deposits. Geologic features found in several caves within the proposed McKinney Butte ACEC/RNA are unique to Idaho caves in their variety, abundance, and virtually undisturbed condition. One cave is characterized by an unusual, unclimbable pit entrance leading into a lava tube that begins about fifty feet below the surface. Another cave consists of one large room lit by a skylight with a side entrance passage. Other caves contain multilevel passages, extraordinarily large rooms, unusual temperature fluctuations, and other features rarely found in lava tube caves. The specific volcanic features of these caves, such as six-foot high lava

extrusions, lava stalactites and stalagmites, lava roses, lava bubbles, lava benches, remelt features, and seasonal ice formations, all contribute to the scenic experience when entering and exploring the caves.

Wildlife Resources: Many forms of biological life have been documented in the caves, including bats and numerous cave-adapted invertebrates. Significant hibernating populations of Townsend's Western big-eared bat (a BLM sensitive species) have been recorded in several caves since 1987. Recent winter inventories of bat hibernacula in this area have shown declines of 66% in hibernating bat populations compared to initial survey results. A decline in wintering bat numbers is occurring throughout the United States and in many areas around the world. Studies have shown a strong correlation between human disturbance of bat hibernacula and population decline. Stabilizing and increasing the populations of Townsend's Western big-eared bats which use the caves in the nominated area would help avert the potential need to list this bat species.

A recent inventory has found a rich and diverse invertebrate cave fauna in the area. The inventory efforts to present have found two species of invertebrates previously unknown to science. In addition, a cave ice beetle (*Glacicavicola* sp.) previously thought to only occur in caves with ice, was collected in one of the caves in the McKinney Butte area which lacked the presence of ice. A more thorough and systematic inventory will likely provide additional information which will broaden and improve our understanding of the specific environmental needs of both lava tube cave troglobites and those organisms which use these caves to complete a portion of their life cycle requirements. The possible discovery of additional unknown animal species would be preserved.

Natural Systems and Processes: The combination of geologic and biologic features contained in the known caves within the proposed McKinney Butte ACEC/RNA area provide the opportunity to experience and observe examples of physical and biological processes which helped shape the environment. One of the caves contains an environment and plant community thought to be representative of conditions found in the area thousands of years ago. Many of the caves contain undisturbed examples of unusual, fragile geologic features associated with volcanic occurrences. Secondary mineral deposits, volcanic remelt features, multilevel passages, and ice formations all provide relatively undisturbed examples of the processes which have shaped the subsurface resource systems, values and processes.

Preliminary findings from a limited paleontological excavation conducted in 1999 in part of one cave in the McKinney Butte area found fossil remains of both camel and muskox. Identification of all the excavated mammalian fossil remains, especially the smaller animal species, has yet to be determined. This information will expand our scientific understanding of shifts in environmental conditions and animal assemblages which have occurred in the past. A more thorough investigation of this known site will likely reveal more fossil remains. The high potential of finding other paleontologic resources in caves located in the nominated ACEC area increases the caves' scientific and educational value.

Rationale for not proposing the ACEC/RNA for designation under the Preferred Alternative (Alternative 3): Not applicable, since the ACEC is proposed for designation under Alternatives 2, 3, and 4.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and list the management prescription(s) necessary to protect those values.

The scenic, biotic, geologic, and paleontologic values contained in the nominated McKinney Butte ACEC require special management consideration, emphasis, and protection beyond that provided by the existing land use plan or general regulations. The following actions would be implemented to help protect the significant resources and values contained in the McKinney Butte area:

(a) Designate the McKinney Butte Area of Critical Environmental Concern as a Research Natural Area to protect significant subsurface resources and focus use of the area on research and education.
(b) Prepare an activity plan for the McKinney Butte ACEC/RNA. The plan will incorporate limitations on any activity that may adversely impact physical, biological, or cultural resources; fire suppression guidelines; annual reporting procedures; physical protection measures; regulatory and/or interpretive signs; law enforcement; and

Limits of Acceptable Change concepts to protect cave resource values. The Limits of Acceptable Change will be cave-specific and developed in consultation with affected user groups.

(c) Continue to follow the provisions and guidance stated in the Upper Snake River District Cave Management Plan (USDI-BLM 1999). [Note: The plan directs monitoring of cave resources and impacts. It includes direction to conduct comprehensive inventories of each cave's physical and structural makeup and biological life. Where needed to protect cave resources, special management actions would be implemented such as surface vehicular closures, marking travel routes through caves, installing bat gates, and requiring permits for visitor use. Law enforcement and public education strategies and actions are also discussed.]

(d) Restrict access to the cave(s) containing bats during winter hibernation periods (October 15 through May 1), except for approved research or BLM management actions. Prohibit access to caves which provide maternity roosts from June 1 through August 31.

(e) Close the ACEC to mineral material sales and free use permits.

(f) Limit vehicle use to designated and signed roads and trails.[6]

(g) Do not allow new land use authorizations (e.g., rights of way, R&PP leases, land use permits).

(h) Designate a total of 13 caves in the McKinney Butte ACEC/RNA as significant.

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TEE-MAZE ACEC/RNA - CRITERIA REVIEW CHECKLIST

Nominated ACEC: Tee-Maze - 10,762 acres

Nominated By: BLM

Location: See Map 14

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	[1]**Yes or No**
Historic: No known significant historic values occur in the nominated area.	No
Cultural: The dry, cool environment of Idaho's caves is conducive to the preservation of archaeological materials, and many caves in Idaho show evidence of prehistoric use by aboriginal people, often for shelter or for storage. Although cultural resources have been documented in the Tee-Maze Caves area, the integrity of these resources has been severely compromised by years of unauthorized use (e.g. looting). Little remains of the archaeological record for this area.	No
Scenic: The area contains diverse and beautiful lava tube features in 12 known caves. One of the caves in the area is the second longest known and mapped cave in Idaho, at more than one and one-third miles long. Large rooms and passages, an abundance and variety of geological features, and pristine environments contribute to the outstanding scenic value of the caves in the nominated ACEC area. Specific features found in area caves include mineral deposits of calcite, opal, gypsum, mirabilite, and iron; lava extrusions; lava roses; driblet spires; stacked tubes; lava stalactites and stalagmites; lava benches; lava bubbles; remelt features; and seasonal ice formations.	Yes
Fish or Wildlife Resource: Significant hibernating bat populations of Western small-footed myotis *(Myotis ciliolabrum)* and Townsend's Western big-eared bat (*Corynorhinus townsendii townsendii*), both BLM sensitive species, have been documented in several of the caves since the 1970's. A biological inventory of selected caves in the nominated ACEC area in 1999 and 2000 found a rich and diverse cave-adapted insect community. The inventory found some relatively widely distributed troglobitic (completing entire life cycle in caves) invertebrates in the caves, in addition to four undescribed species.	Yes
Natural Process or System: The Tee-Maze area and its caves represent the natural process of volcanism and lava tube formation (volcanospeleology). The area is characterized by a late Pleistocene basaltic lava flow that is believed to have originated at a volcanic vent near the northeastern border of the nominated Tee-Maze ACEC area. These lava tube caves provide protection from outside elements, stable, low temperature, and constant humidity levels, resulting in ideal conditions for the preservation of fossil remains. In addition, some lava blisters have been found to be carnivore traps, providing a rich accumulation of animal remains. No systematic paleontological inventories have been completed in the nominated area, but random discoveries and isolated scientific excavations in other caves in the Snake River Plains area have documented extinct or extirpated species from the Pleistocene through the Holocene epochs.	Yes
Natural Hazard: All caves can be potentially dangerous to the unprepared visitor. However, the caves in and of themselves are not a natural hazard.	No

Importance: Does the value, resource system, process, or hazard meet one or more of the following importance factors: (1) has more than locally significant qualities and special worth or cause for concern; (2) has qualities/circumstances making it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; (3) is recognized as warranting protection to satisfy national priority concerns or carry out FLPMA's mandates; (4) warrants highlighting to satisfy concerns about safety and public welfare?	**[2]Yes/ No or N/A**
Historic:	N/A
Cultural:	N/A
Scenic: Caves in the area exhibit a number of attributes which offer unusually fine cave scenery. The high scenic quality of these caves is a result of varying cave passage dimensions, an abundance and variety of geological features, and a pristine environment. The surveyed length of some caves in the area exceeds 1.4 miles. One of the caves contains many outstanding examples of lava tube features including the largest collection of lava stalactites, stalagmites, and lava roses of any known cave in Idaho.	Yes
Fish or Wildlife Resource: Eleven of the 12 known caves in the area list biota as one of the values they contain which contributed to their determination as significant caves. The relatively undisturbed nature of caves in the area has helped maintain the highly diverse number of cave-adapted animals. Some of the caves are used as a hibernaculum for significant numbers of Townsend's big-eared bats. Four species of un-described troglobitic (completing entire life cycle in caves) invertebrates are present in the caves.	Yes
Natural Process or System: The abundance, variety and relatively pristine condition of many of the geologic features found in several caves in the area are unique to Idaho caves. One cave in particular contains many outstanding examples of lava tube features, including the largest collection of lava stalactites, stalagmites, and lava roses of any known cave in Idaho. Extrusion spires, hornitos, and concentric extrusion rings, seldom found even on the surface of new lava flows, are present in abundance in portions of this cave. Outstanding examples of secondary mineral deposits of gypsum, mirabilite, and thernadite are abundant on the cave walls and floor. The value of paleontologic resources in the central Snake River Plain caves is considered by experts to be significant. The only known fossil records from the central Snake River Plain are from lava tubes and pits. The high potential of finding paleontologic resources in caves located in the nominated area increases the scientific and educational value of the caves.	Yes
Natural Hazard:	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Tee-Maze ACEC/RNA[4] for designation under all action alternatives (Alternatives 2, 3, and 4) is as follows:

The nominated area met relevance and importance criteria for scenic values, wildlife resources, and natural processes and systems.

Scenic Values: The specific scenic features found in area caves include lava extrusions, lava stalactites and stalagmites, linings and glaze, rafted blocks, lava ponds and tongues, levees and gutters, and seasonal ice formations. Secondary cave mineralization deposits occur in nearly every form known to caves, including stalactites and stalagmites, draperies, coraloids, helictites, rimstone, shelfstone, conulites, needles, and hair. Both primary and secondary formations are typically fragile and considered non-renewable, as the primary formations were created during active volcanism and the

latter were formed over the course of thousands of years. The abundance, variety, and relatively pristine condition of many of the geologic features found in several caves in the area are unique to Idaho caves.

Wildlife Resources: Many forms of biological life have been documented in the caves, including bats and numerous cave-adapted invertebrates. Significant hibernating populations of Townsend's Western big-eared bat have been recorded in several caves since the 1970's. Recent winter inventories have shown declines of nearly 75% in local hibernating bat populations compared with survey numbers obtained in the late 1980's. A decline in wintering bat numbers is occurring throughout the United States and in many areas around the world. Studies have shown a strong correlation between human disturbance of bat hibernacula and population decline. Stabilizing and increasing the populations of Townsend's Western big-eared bats which use the caves in the nominated area would help avert the potential need to list this bat species.

Biological inventories conducted to date have found a diverse assemblage of organisms utilizing the lava tube cave environment. This limited inventory effort has found four species of invertebrates previously unknown to science. A more thorough and systematic inventory will likely provide additional information which will broaden and improve our understanding of the specific environmental needs of both lava tube cave troglobites and those organisms which use these caves to complete a portion of their life cycle requirements. The possible discovery of additional unknown animal species would be preserved.

Natural Systems and Processes: A partial listing of fossil remains found in lava tube caves on the Snake River Plain includes camel, mammoth, bison, grizzly bear, short-faced bear, dire wolf, lemming, muskox, kit fox, black-footed ferret, wolverine, pine marten, and lynx. New paleontological information could expand our current scientific understanding of shifts in environmental conditions and animal assemblages which have occurred in the past. The high potential of finding paleontologic resources in caves located in the Tee-Maze ACEC area increases the scientific and educational value of the caves.

Rationale for not proposing the ACEC/RNA for designation under the Preferred Alternative (Alternative 3): Not applicable, since the ACEC is proposed for designation under Alternatives 2, 3, and 4.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and list the management prescription(s) necessary to protect those values.

The scenic, biotic, geologic, and paleontologic values contained in the nominated Tee-Maze ACEC/RNA require special management consideration, emphasis, and protection beyond that provided by the land use plan or general regulations. The following actions would be implemented to help protect the significant resources and values contained in the Tee-Maze area:

(a) Designate the Tee-Maze Area of Critical Environmental Concern as a Research Natural Area to protect significant subsurface resources and focus use of the area on research and education.
(b) Prepare an activity plan for the Tee-Maze ACEC/RNA. The plan will incorporate limitations on any activity that may adversely impact physical, biological, or cultural resources; fire suppression guidelines; annual reporting procedures; physical protection measures; regulatory and/or interpretive signs; law enforcement; and Limits of Acceptable Change concepts to protect cave resource values. The Limits of Acceptable Change will be cave-specific and developed in consultation with affected user groups.
(c) Continue to follow the provisions and guidance stated in the Upper Snake River District Cave Management Plan (BLM 1999). [**Note:** The plan directs monitoring of cave resources and impacts. It includes direction to conduct comprehensive inventories of each caves' physical and structural makeup and biological life. Where needed to protect cave resources, special management actions would be implemented such as surface vehicular closures, marking travel routes through caves, installing bat gates, and permitted visitor use. Law enforcement and public education strategies and actions are also discussed.]

(d) Restrict access to the cave(s) containing bats during winter hibernation periods (October 15 through May 1), except for approved research or BLM management actions. Prohibit access to caves which provide maternity roots from June 1 through August 31.
(e) Limit mineral material sales and free use permits to existing sites and public lands adjacent to State Highway 75.
(f) Limit vehicle use to designated and signed roads and trails, except for allowing (1) the existing stackable blocky lava permit holder to continue to have cross-country access to his permitted area for the duration of his permit, and (2) allowing cross-country access within the Mammoth Cave Common Use Area.[6]
(g) Do not allow new land use authorizations (e.g., rights of way, R&PP leases, land use permits).
(h) Designate a total of 12 caves in the Tee Maze ACEC/RNA as significant.

Appendix 4 - Demographic Information

Part A: Population Information

(County and City Population Census Data for Selected Counties and Cities within the Region of Influence to the Planning Area)

County City	Population - 2000 Census	% Population in Cities[3]	% Change from 1990-2000	% Change from 1980-2000	% Change from 1920-2000
Blaine[1]	17,326	75	+40	+93	+387
Bellevue	1,876				
Carey	513				
Hailey	6,200				
Ketchum	3,003				
Sun Valley	1,427				
Camas[1]	865	46	+36	+6	-50
Fairfield	395				
Elmore	29,130	47	+37	+35	+573
Gooding[1]	13,743	48	+22	+16	+82
Bliss	275				
Gooding	3,384				
Hagerman	656				
Wendell	2,338				
Jerome[1]	18,110	49	+21	+22	+316
Eden	411				
Hazelton	687				
Jerome	7,780				

County City	Population - 2000 Census	% Population in Cities[3]	% Change from 1990-2000	% Change from 1980-2000	% Change from 1920-2000
Lincoln[1]	3,839	51	+22	+12	+11
Dietrich	150				
Richfield	412				
Shoshone	1,398				
Minidoka	20,174	51	+4	+2	+223
Twin Falls[2]	64,284	69	+20	+21	+226
Twin Falls[2]	34,469				
Ada[2]	300,904	78	+46	+74	+855
Boise[2]	185,787				

Note: Idaho's population in 2000 was 1,293,953. The state's population is projected to increase to 1,622,000 in 2015 (a 25% increase from the 2000 population) and to 1,739,000 by 2025 (a 34% increase from the 2000 population).

[1] Percent population growth for the five major counties in the planning area (Blaine, Camas, Gooding, Jerome, and Lincoln) since 1920 is 235%, and since 1980 is 35%.

[2] Population statistics for Ada and Twin Falls counties and the cities of Boise and Twin Falls are included for information purposes only, because those population centers have a major impact on the planning area.

[3] Population identified as living within one of the listed cities; "percent in cities" is calculated by dividing the sum of a city's population by the total population of the county. Cities listed are all of the cities within the specified county, with the exception of Twin Falls and Ada counties, where only the cities of Twin Falls and Boise are listed. No cities are listed for Elmore or Minidoka counties because those counties comprise only a small portion of the planning area.

Sources:

Population of Idaho and Idaho Counties by Decennial Census, 1900-1990, Population Division, U.S. Bureau of Census, Washington, D.C., 20233.

State and County QuickFacts, Idaho and Selected Counties, 2000, U.S. Bureau of the Census, Washington, D.C., 20233.

Population Estimates Program, Population Division, U.S. Bureau of the Census. Washington, D.C.

www.census.gov/population/projections/state/stpjpop.txt (Population Projections of the States: 1995-2025)

Part B: Median Income and Area Information

County	Median Household Income[2]	Area (square miles)	Persons/square mile
Ada[1]	$43,321	1,055	285.2
Blaine	$45,504	2,645	7.2
Camas	$35,445	1,075	0.9
Elmore	$32,486	3,078	9.5
Gooding	$28,957	731	19.4
Jerome	$30,938	600	30.6
Lincoln	$30,036	1,206	3.4
Minidoka	$30,598	760	26.5
Twin Falls[1]	$32,169	1,925	33.4
State of Idaho	**$33,612**	**82,747**	**15.6**

[1] Statistics for Ada and Twin Falls counties are included for information purposes only, because those population centers have a major impact on the planning area.

[2] Median household income represents the mid-point or mid-range of household income - i.e., half of the population's annual household income is above the median income and half is below the median income.

Note: Blaine County has the highest median household income for the State of Idaho, and Gooding County has one of the lowest median household incomes.

Source:

Median household income is from the 1997 Model-Based Estimate Data, State and County QuickFacts, Idaho and Selected Counties. U.S. Bureau of the Census. Washington, D.C.

Appendix 5

Shoshone Field Office
FY2000 Recreation Data from
Recreation Management Information System (RMIS)

	Visitor Days[1] in 2000
Wood River Valley	337,966
Bennett Hills (West Side)	126,407
Magic Reservoir	134,989
Monument (East Side)	285,443
Snake River Rim	15,760
Total	**900,565**

[1] A visitor day is equivalent to twelve visitor hours. It is calculated by dividing recorded visitor hours by 12.

Note: It is estimated another 435,000 persons travel through the Shoshone Field Office area annually, enroute to other destinations outside the planning area (McLaughlin, et. al., 2001)

Appendix 6

Federal Land Transaction Facilitation Act (FLTFA) Lands
(Disposal Lands as of July 25, 2000)

Alternative 1: All of the lands listed in this appendix (approximately 49,972.86 acres) were identified for potential disposal in the Shoshone Field Office's existing land use plans as of July 25, 2000, and would be therefore be available for potential disposal under the Federal Land Transaction Facilitation Act. This appendix provides a legal description of the disposal tracts; the approximate location of these tracts is displayed on Map 2. [**Note:** The lands identified in this appendix are the *only* public lands that can be considered for potential disposal under existing management. Some lands identified as of July 25, 2000 are no longer available for disposal and are therefore not included on this list (e.g., lands within the recently expanded Craters of the Moon National Monument)]

Alternatives 2, 3, and 4: Only those lands shown in standard type in this appendix (approximately 45,739.09 acres) would be available for potential disposal under the provisions of the Federal Land Transaction Facilitation Act. Those tracts identified in **bold type and with an asterisk (*)** do not meet the plan amendments' disposal criteria (see Appendix 1) and are being retained in public ownership. [**Note:** The lands identified in standard type in this appendix are not the only public lands that could be considered for disposal under these plan amendments (Alternatives 2, 3, or 4). However, these are the only lands that could be disposed of under the Federal Land Transaction Facilitation Act.]

T. 9 S., R. 17 E., Boise Meridian

Section 14:	SE, N2SW (portion N of I-84), S2NE, S2S2NW, NWSWNW, SWNESWNW, ***S2SW (*portion S of I-84, approx 50 acres +/-)**
Section 15:	SW, NESE, NWSE, E2SWSE, SENE, S2SWNE, S2S2NW, W2SWNW, NWSWNW, W2SWSENW, ***E2SESE, *E2W2SESE**
Section 20:	N2SE
Section 21:	S2, NE, E2NW, SWNW
Section 22:	W2, W2SWSE, W2E2SWSE
Section 28:	NENW, N2NE, SENE

Containing Approximately 2,032.50 acres
Drop from consideration:
Approximately 75 acres

T. 9 S., R. 18 E., Boise Meridian

Section 16:	NENE
Section 34:	SWNW, N2SW Portions south of Interstate 84

Containing Approximately 160 acres

***Denotes lands that would be dropped from consideration for potential disposal under Alternatives 2, 3, and 4.**

T. 9 S., R. 19 E., Boise Meridian

Section 10:	SWNW, W2SW
Section 11:	S2NWSE, S2NESW, S2S2SWSW
Section 12:	W2SESWSE
Section 20:	S2SW
Section 25:	W2W2NW
Section 26:	E2SENE
Section 29:	N2NW
Section 30:	Lot 1 (21.50), NENW

Containing Approximately 456.50 acres

T. 9 S., R. 20 E., Boise Meridian

Section 8:	Lots 2 (10.02), 3 (30.07), S2SW, W2SE
Section 24:	S2SE
Section 25:	N2NE, NENW, S2NW, NWSE
Section 35:	S2SE

Containing Approximately 600.09 acres

T. 9 S., R 21 E., Boise Meridian

Section 19:	Lot 4 (41.55), SWNE, SESW, E2NESW, E2W2NESW

Containing Approximately 151.55 acres

T. 8 S., R. 18 E., Boise Meridian

Section 30:	SENW

Containing Approximately 40 acres

T. 8 S., R. 21 E., Boise Meridian

Section 3:	S2, S2N2
Section 4:	SE
Section 5:	SENE
Section 10:	N2NW
Section 11:	S2SE
Section 12:	E2NW, W2SW
Section 21:	E2NW
Section 24:	SENE
Section 27:	W2W2, E2SW
Section 28:	E2NW, NESW
Section 32:	SWSE, portion of NWSE (20 ac.)

Containing Approximately 1,540 acres

T. 8 S., R. 22 E., Boise Meridian

Section 4:	S2S2
Section 8:	NE
Section 19:	Lots 2 (43.61), 3 (43.63), 4 (43.65), SENW, SESE
Section 20:	SW, S2NW

Containing Approximately 770.89 acres

T. 7 S., R. 23 E., Boise Meridian
Section 5: Lot 3 (25.97), SENW

Containing Approximately 65.97 acres

T. 7 S., R. 22 E., Boise Meridian
Section 26: N2, SW
Section 27: ALL
Section 28: ALL
Section 33: NE
Section 34: ALL
Section 35: ALL

Containing Approximately 3,200 acres

T. 7 S., R. 21 E., Boise Meridian
Section 3: Lots 1 (19.95), 2 (20.05), 3 (20.15), 4 (20.25), S2N2, S2
Section 4: Lots 1 (20.28), 2 (20.26), S2NE, N2SE
Section 6: Lot 7 (41.30)
Section 10: ALL
Section 11: S2
Section 12: S2SW
Section 13: N2NW
Section 14: ALL
Section 23: N2, N2S2
Section 33: S2
Section 34: S2S2, NWNW

Containing Approximately 3,562.24 acres

T. 7 S., R. 20 E., Boise Meridian
Section 1: SESE

Containing Approximately 40 acres

T. 7 S., R. 19 E., Boise Meridian
Section 2: Lot 2 (19.39), SWNE

Containing Approximately 59.39 acres

T. 7 S., R. 18 E., Boise Meridian
Section 8: ***S2, *S2NE, *SENW**
Section 10: SENW, SWNE, N2SE, NESW, ***SWNW**
Section 11: NWSW
Section 34: SW

Containing Approximately 880 acres
***Drop from consideration: Approximately 480 acres**

T. 7 S. R. 16 E., Boise Meridian
Section 9: SE, S2NE
Section 14: NWSW

Containing Approximately 280 acres

***Denotes lands that would be dropped from consideration for potential disposal under Alternatives 2, 3, and 4.**

T. 7 S., R., 14 E., Boise Meridian
Section 3: S2SW

Containing Approximately 80 acres

T. 6 S., R. 13 E., Boise Meridian
Section 14: NWNE

Containing Approximately 40 acres

T. 6 S., R. 15 E., Boise Meridian
Section 12: SESW
Section 13: E2NW
Section 20: SENE, N2SE, SESE
Section 21: SW, N2SE, SESE
Section 22: N2SW, SWSW

Containing Approximately 680 acres

T. 6 S., R. 16 E., Boise Meridian
Section 5: Lots 2 (47.89), 3 (48.19), 4 (48.51)

Containing Approximately 144.59 acres

T. 6 S., R. 17 E., Boise Meridian
Section 2: W2SWSW
Section 12: Portion of Lot 3 (5.0 +/-)

Containing Approximately 25 acres

T. 6 S., R. 18 E., Boise Meridian
Section 4: W2SE
Section 8: Portions south of road in N2SW, NWSE, and S2SE (160 +/-)
Section 9: Portion south of road in SWSWSW (5 +/-)
Section 11: NESW
Section 21: NWNE

Containing Approximately 365 acres

T. 6 S., R. 19 E., Boise Meridian
Section 8: E2NW, W2NE, NENE
Section 9: N2NE
Section 11: NENE
Section 15: SWNW
Section 22: NWNE

Containing Approximately 400 acres

T. 6 S., R. 21 E., Boise Meridian
Section 17: E2NE, NESE
Section 19: Lots 6 (40.00), 7 (40.00), 8 (40.00), 9 (16.21), 10 (16.28), 11 (40.00), 12 (40.00), S2NE, N2SE
Section 20: NENW, S2NW, N2SW, E2SE
Section 28: S2
Section 29: E2E2, NESW
Section 30: Lots 2 (40.00), 3 (16.35)
Section 31: SENE, E2SE
Section 32: S2, S2NW, NENW
Section 35: SENW, E2SW

Containing Approximately 2,048.84 acres

T. 6 S., R. 22 E., Boise Meridian
Section 26: E2SE, SW
Section 29: N2SW, SWSW
Section 30: Lot 6 (40.00), S2NE, SE
Section 33: Lots 1 (43.22), 2 (43.12), N2SE
Section 35: Lots 1 (43.96), 3 (43.96), 4 (43.94), NW, E2NE, NESE, N2SW
Containing Approximately 1,298.20 acres

T. 6 S., R. 23 E., Boise Meridian
Section 28: E2NW, S2NE, NWNE, W2NENE, SWSE
Section 34: E2
Section 35: NW, S2NE, N2S2, SWSW
Containing Approximately 1,020 acres

T. 6 S., R. 24 E., Boise Meridian
Section 31: SESE
Containing Approximately 40 acres

T. 5 S., R. 12 E., Boise Meridian
Section 2: E2SE
Section 34: SESE
Containing Approximately 120 acres

T. 5 S., R. 13 E., Boise Meridian
Section 3: SWSW
Containing Approximately 40 acres

T. 5 S., R. 15 E., Boise Meridian
Section 1: Lot 2 (40.35), SWNE
Section 4: NWSW, NWSW
Section 13: SWNW
Section 14: SENE
Section 21: SESE
Section 22: S2NW, SWNE, W2SE, SW
Section 23: E2E2, SWSE, S2SW
Section 24: W2W2, ***E2, *E2W2**
Section 25: S2NW, ***N2NW**
Section 26: N2NW, SENW, NE, N2SE, NESW
Section 27: NW, N2NE, SWNE, NWSW
Section 28: E2NE, SE, E2SW
Section 33: NW, N2NE, SWNE
Containing Approximately 3,040.35 acres
***Drop from consideration: Approximately 560 acres**

***Denotes lands that would be dropped from consideration for potential disposal (Alternatives 2, 3, and 4 only)**

T. 5 S., R. 16 E., Boise Meridian
Section 13: NENE
Section 18: **Lots *3 (38.76), *4 (38.81), *E2SW**
Section 19: **Lots *1 (38.90), *2 (39.03), *3 (39.15), *4 (39.28), *E2W2, *E2**
Section 32: W2NW, NESW, S2NE, SE, E2SW

Containing Approximately 1,273.93 acres
***Drop from consideration: Approximately 793.93 acres**

T. 5 S., R. 17 E., Boise Meridian
Section 15: SWNW
Section 18: Lot 1 (46.04), NENW

Containing Approximately 126.04 acres

T. 5 S., R. 18 E., Boise Meridian
Section 33: Portion of S2SW (55+/-)
Section 34: NWSW, SESW

Containing Approximately 135 acres

T. 4 S., R. 16 E., Boise Meridian
Section 25: SWSW
Section 28: NENE, NESW
Section 30: NWSE, NESW

Containing Approximately 200 acres

T. 4 S., R. 17 E., Boise Meridian
Section 28: W2SW

Containing Approximately 80 acres

T. 4 S., R. 19 E, Boise Meridian
Section 25: Lot 5 (41.04)

Containing Approximately 41.04 acres

T. 4 S., R. 20 E., Boise Meridian
Section 17: SENE

Containing Approximately 40 acres

T. 3 S., R. 18 E., Boise Meridian
Section 29: Lot 1 (40.64), NWNE

Containing Approximately 80.64 acres

T. 2 S., R. 21 E., Boise Meridian
Section 31: Lot 1 (40.52)

Containing Approximately 40.52 acres

T. 2 S., R. 25 E., Boise Meridian
Section 7: ***NENE**

Containing Approximately 40 acres+
***Drop from consideration: Approximately 40 acres**

+**Note:** Even though this tract is identified for disposal in the existing land use plan, it can no longer be considered for disposal because the lands lie within the recently expanded Craters of the Moon National Monument.

***Denotes lands that would be dropped from consideration for potential disposal (Alternatives 2, 3, and 4 only)**

T. 1 S., Range 25 E., Boise Meridian

Section 30: **Lots *5 (south half 20.00), *9 (18.24)**

Section 31: **Lots *1 (40.00), *2 (40.00), *3 (18.33), *4 (18.36), *5 (40.00), *6 (40.00)**

Containing Approximately 234.93 acres+

***Drop from consideration: Approximately 234.93 acres**

+**Note:** Even though these tracts are identified for disposal in the existing land use plan, they can no longer be considered for disposal because the lands lie within the recently expanded Craters of the Moon National Monument.

T. 1 S., R. 21 E., Boise Meridian

Section 4: Lots 1 (46.07), 2 (46.24), 3 (46.41), 4 (46.58), SESE

Section 5: Lot 1 (47.05)

Section 17: W2W2, NENW

Section 18: Lots 1 (45.44), 2 (45.44), SENW, S2NE, N2SE, SESE, NESW

Containing Approximately 843.23 acres

T. 1 S., R. 12 E., Boise Meridian

Section 5: Lots 2 (26.64), 3 (26.54), 4 (26.44), SENW

Section 6: Lots 1 (26.34), 2 (26.13), 3 (26.04), 4 (26.74), 5 (38.67), SENW, S2NE, SE, E2SW

Section 7: N2NE

Containing Approximately 703.54 acres

T. 1 S., R. 11 E., Boise Meridian

Section 1: Lot 4 (24.36), SWNW

Section 2: Lots 1 (23.90), 2 (23.49), 3 (23.09), 4 (22.68), S2NW, N2SW,NESE

Section 8: E2E2, SWSE

Section 9: W2W2

Section 16: E2SE, NWSE, N2SW

Section 17: N2, N2S2

Section 18: Lots 1 (35.90), 2 (35.79), E2NW, W2NE, SENE, N2SE

Section 21: E2NE, NESE

Section 22: N2S2, SESE

Section 27: E2NE

Containing Approximately 2,149.21 acres

T. 1 S., R. 17 E., Boise Meridian

Section 35: SENW, SWNE, NWSE, NESW, S2SW

Containing Approximately 240 acres

T. 1 N., R. 23 E., Boise Meridian

Section 6: Lot 7 (41.33), E2SW

Containing Approximately 121.33 acres

T. 1 N., R. 22 E., Boise Meridian

Section 1: Lots 1 (40.03), 2 (40.10), 3 (40.16), SWNE

Section 19: Lots 1 (37.81), 2 (38.00), SENW

Containing Approximately 276.10 acres

***Denotes lands that would be dropped from consideration for potential disposal (Alternatives 2, 3, and 4 only)**

T. 1 N., R. 21 E., Boise Meridian

Section 11:	NWSW
Section 12:	Lot 3 (46.86)
Section 18:	SE, SESW
Section 19:	N2NE, SENE, NESE
Section 20:	Lot 3 (29.19), NESW, E2SE, SWSE
Section 21:	SWNE, W2SE
Section 24:	Lot 2 (43.36), W2SW
Section 28:	S2NW, SWNE, W2SE, SESE, SW
Section 29:	Lots 1 (29.36), 2 (29.49), 3 (29.61), E2NW, W2NE, SENE, N2SE, SESE, NESW
Section 32:	Lot 2 (29.86), NENW, NENE
Section 33:	Lots 1 (39.73), 2 (39.20), 3 (38.66), 4 (38.13), N2NE

Containing Approximately 2,073.45 acres

T. 1 N., R. 20 E., Boise Meridian

Section 1:	NESE
Section 4:	SWSE
Section 13:	SE, SWSW
Section 24:	SWSW

Containing Approximately 320 acres

T. 1 N., R. 16 E., Boise Meridian

Section 7:	Lot 2 (44.18)
Section 18:	Lots 3 (44.50), 4 (44.57), E2SW, W2SE, SESE
Section 19:	Lots 1 (44.57), 2 (44.50), 3 (44.44), 4 (44.37), E2NW, N2NE, SWNE, W2SE, E2SW
Section 20:	NWNW, SWSW
Section 31:	Lot 1 (40.94), E2NW, NE, NWSE

Containing Approximately 1,561.14 acres

T. 1 N, R. 15 E., Boise Meridian

Section 2:	Lots 3 (41.12), 4 (41.20), S2NW, W2SW
Section 26:	SENW

Containing Approximately 282.32 acres

T. 1 N., R. 14 E., Boise Meridian

Section 5:	Lots 2 (40.80), 3 (40.79), N2SW
Section 10:	W2SW
Section 11:	NENE
Section 14:	N2NE
Section 20:	W2NW

Containing Approximately 441.59 acres

T. 1 N., R. 13 E., Boise Meridian

Section 4:	Lots 1 (41.06), 2 (41.15), 3 (41.29), 4 (44.61), 5 (42.49), 6 (41.89)
Section 5:	Lots 1 (41.48) 2 (41.16), 3 (40.85), 4 (40.53), S2N2, S2
Section 7:	Lot 5 (39.72)
Section 8:	Lot 1 (40.40)
Section 10:	W2SW
Section 13:	W2E2, SESW
Section 15:	W2W2, E2SW
Section 18:	Lots 3 (46.72), 4 (47.01)
Section 19:	Lots 1 (47.33), 2 (47.66), 3 (47.99), 4 (48.32), E2W2, E2NE
Section 20:	SWNW, NWSW
Section 24:	SWNW, E2NW, NE, N2SW
Section 30:	Lot 1 (48.32), NENW

Containing Approximately 2,549.98 acres

T. 1 N., R. 12 E., Boise Meridian

Section 12:	ALL
Section 13:	N2, SE, E2SW, NWSW
Section 14:	N2NE, SENE
Section 24:	NENW, NE, N2SE
Section 25:	E2SE
Section 31:	SE

Containing Approximately 1,880 acres

T. 2 N., R. 12 E., Boise Meridian

Section 31:	Lots 1 (31.11), 2 (30.84), 3 (30.58), 4 (30.24), 5 (29.70), 6 (39.46), 7 (39.22), E2NW, NE, NESW, N2SE
Section 32:	Lots 1 (39.36) 2 (39.29), 3 (39.21), 4 (39.14), N2, N2S2
Section 33:	Lots 1 (39.79), 2 (39.61), 3 (39.45), 4 (39.82), N2, N2S2
Section 34:	Lots 1 (40.64), 2 (40.09), 3 (39.84), 4 (39.82), N2, N2S2
Section 35:	Lots 1 (41.36), 2 (41.02), 3 (40.98), 4 (40.92), N2, N2S2

Containing Approximately 3151.49 acres[+]

[+]**Note:** These lands are currently identified for transfer to the U.S. Forest Service only (Alternative 1). Under Alternatives 2, 3, and 4 these lands would be available for disposal to others as well.

T. 2 N. R. 13 E., Boise Meridian

Section 31:	Lots 1 (45.48), 2 (45.63), 3 (45.79), 4 (45.83), 5 (39.72), 6 (39.77), 7 (39.99), E2NW, NE, N2SE, SESW
Section 32:	Lots 1 (38.56), 2 (38.91), 3 (39.31), 4 (39.81), N2, N2S2
Section 33:	Lots 1 (37.85), 2 (38.14), 3 (38.31), 4 (38.34), N2, N2S2

Containing Approximately 1,931.44 acres

T. 2 N., R. 20 E., Boise Meridian

Section 4: SWNE
Section 10: W2NW
Section 11: NWSW
Section 13: S2SE, SESW
Section 23: NENW, N2NE
Section 24: N2N2
Section 28: SWSW

Containing Approximately 600 acres

T. 2 N., R. 21 E., Boise Meridian

Section 12: SESW
Section 14: E2NW, N2NE
Section 15: SENE, NESE, SWSE, SWSW
Section 20: S2NW, E2NE, SWNE, NWSE

Containing Approximately 600 acres

T. 2 N., R. 22 E., Boise Meridian

Section 1: N2NE, S2SE, W2SW, NESW, SWNW
Section 2: SESE
Section 4: SESE
Section 9: N2NE, SWNE, SE, S2SW
Section 11: SENW, SWNE, W2SE, E2SW
Section 12: NWNW, N2NE, E2SW, SWSW
Section 13: SENW, SWNE, NWSE, SWSW
Section 15: E2SE
Section 17: NE
Section 21: N2NW, SENW
Section 22: NENE
Section 24: NWNW
Section 25: NWNW
Section 33: W2NE

Containing Approximately 1,960 acres

T. 2 N. R 23 E., Boise Meridian

Section 6: Lot 1 (39.14), NENW, SWSE
Section 18: N2SE, E2SW
Section 30: Lot 2 (39.36)
Section 31: Lots 2 (39.63), 3 (39.90), 4 (40.10), 7 (40.79)

Containing Approximately 478.92 acres

T. 3 N., R. 23 E., Boise Meridian

Section 32: SWNE
Section 33: NWSW

Containing Approximately 80 acres

T. 3 N., R. 22 E., Boise Meridian

Section 35: SENE

Containing Approximately 40 acres

T. 3 N., R. 20 E., Boise Meridian
Section 19: NENW

Containing Approximately 40 acres

T. 3 N., R. 19 E., Boise Meridian
Section 24: W2NE, SENE

Containing Approximately 120 acres

T. 4 N., R. 18 E., Boise Meridian
Section 5: **Lot *4 (37.60)**
Section 6: **Lots *1 (37.22), *2 (36.96), *3 (36.48), *4 (36.14), *5 (40.60), *6 (41.16), *SENW, *S2NE**
Containing Approximately 386.16 acres+
***Drop from consideration: Approximately 386.16 acres**
+**Note:** These lands are currently identified for transfer to the U.S. Forest Service only (Alternative 1). They would be retained in public ownership under Alternatives 2, 3, and 4.

T. 4 N., R. 17 E., Boise Meridian
* Section 1: **Lots *1 (35.83), *2 (35.99), *5 (34.38), SWNE +**
Section 13: Portions south of road NENENENWNW and E2E2E2SENW (6 +/-)
Containing Approximately 152.20 acres
***Drop from consideration: Approximately 146.20 acres**
+**Note:** These lands are currently identified for transfer to the U.S. Forest Service only (Alternative 1). They would be retained in public ownership under Alternatives 2, 3, and 4.

T. 5 N., R. 17 E., Boise Meridian
* Section 36: ***NWNW, *SENW, *S2NE, *SE, *E2SW**
Containing Approximately 400 acres+
***Drop from consideration: Approximately 400 acres**
+**Note:** These lands are currently identified for transfer to the U.S. Forest Service (Alternative 1). They would be retained in public ownership under Alternatives 2, 3, and 4.

T. 5 N., R. 18 E., Boise Meridian
* Section 31: **Lots *2 (39.76), *3 (39.70), *4 (39.56), *5 (39.74), *6 (39.74), *7 (39.91), *8 (39.04), *E2NW, *NE, *N2SE, *NESW**
* Section 32: **Lot *4 (40.10), *N2, *NWSE, *N2SW**
Containing Approximately 1,117.55 acres+
***Drop from consideration: Approx. 1,177.55 acres**
+**Note:** These lands are currently identified for transfer to the U.S. Forest Service (Alternative 1). They would be retained in public ownership under Alternatives 2, 3, and 4.

***Denotes lands that would be dropped from consideration for potential disposal (Alternatives 2, 3, and 4 only)**

Alternative 1:

Total Acres Available for Potential Disposal Under FLTFA — approximately 49,972.86 acres

Alternatives 2, 3, and 4:

Total Acres Dropped from Potential Disposal — approximately 4,233.77 acres

Total Acres Available for Potential Disposal under FLTFA — approximately 45,739.09 acres

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Appendix 7
Part A: Special Status Animal Species Known to Occur in the Shoshone Field Office Area

(Based on FWS Species List Number 1-4-02-SP-465. Also see legend beginning on page 191.)

Species	Status		
	Fed.	ID	BLM
MAMMALS			
Gray Wolf (Canis lupus)	E(XN)	E	1
Canada Lynx (Lynx canadensis)	T	SC	1
Townsends's Western Big-eared Bat (Corynorhinus townsendii townsendii)	I	SC	3
Yuma Myotis (Myotis yumanensis)	I		W
Western Pipistrelle (Pipstrellus hesperus)	I	SC	4
Western Small-footed Myotis (Myotis ciliolabrum)	I		W
Long-eared Myotis (Myotis evotis)	I		W
Long-legged Myotis (Myotis volans)	I		W
Pygmy Rabbit (Brachylagus idahoensis)	I	SC	3
North American Wolverine (Gulo gulo luscus)	I	SC	3
Kit Fox (Vulpes macrotis)	I	SC	3
BIRDS			
White-faced Ibis (Plegadis chihi)	I		3
Trumpeter Swan (Cygnus buccinator)	I	SC	3
Bald Eagle (Haliaeetus leucocephalus)	T	E	1
Northern Goshawk (Accipiter gentilis)	I	SC	3
Ferruginous Hawk (Buteo regalis)	I		3
Greater Sage Grouse (Centrocercus urophasianus)	I		3
Black Tern (Chlidonias niger)		SC	3
Yellow-billed Cuckoo (Coccyzus americanus)	C	SC	2
Boreal Owl (Aegolius funereus)	I	SC	3
Northern Pygmy Owl (Surnia ulula)			W
Western Burrowing Owl (Athene cunicularia hypugea)	I		W
Flammulated Owl (Otis flammeolus)	I		-
Calliope Hummingbird (Stellula calliope)			W
Lewis Woodpecker (Melanerpes lewis)			W
Red-naped Sapsucker (Sphyrapicus nuchalis)			W
Williamson's Sapsucker (Sphyrapicus thyroides)			W
Killdeer (Charadrius vociferus)			W
Long-billed Curlew (Numenius americanus)	I		W
Loggerhead Shrike (Lanias ludovicianus)	I	SC	3
Willow Flycatcher (Empidonax traillii)			3

Species	Status		
	Fed.	ID	BLM
BIRDS (continued)			
Olive-sided flycatcher (Contopus cooperi)			W
Pinyon Jay (Gymnorhinus cyanocephalus)			W
Sage Thrasher (Oreoscoptes montanus)			3
Plumbeous Vireo (Vireo plumbeus)			W
Lazuli Bunting (Passerina cyanea)			W
Green-tailed Towhee (Pipilo chlorurus)			W
Virginia's Warbler (Vermivora virginiae)			4
Brewer's Sparrow (Spizella breweri)			3
Grasshopper Sparrow (Ammodromas savannarum)			W
Black-throated Sparrow (Amphispiza bilineata)			4
Sage Sparrow (Amphispiza belli)			3
REPTILES & AMPHIBIANS			
Western Toad (Bufo boreas)	I	SC	3
Northern Leopard Frog (Rana pipiens)	I	SC	3
Columbia Spotted Frog (Rana luteiventris)	I	SC	2
Common Garter Snake (Thamnophis sirtalis)	I		3
Mojave Black-collared Lizard (Crotaphytus bicinctores)	I	SC	3
Longnose snake (Rhinocheilus lecontei)	I	SC	3
Short-horned lizard (Phrynosoma douglassi)	I		-
FISH			
Leatherside Chub (Gila copei)	I		3
Interior Redband Trout (Oncorhynchus mykiss gibbsi)	I		2
Shoshone Sculpin (Cottus greenei)	I		2
White Sturgeon (Acipenser transmontanus)	I		3
Wood River Sculpin (Cottus leiopomus)	I		2
INVERTEBRATES			
Bliss Rapids Snail (Taylorconcha serpenticola)	T		1
Idaho Springsnail (Fontelicolla idahoensis)	E		1
Utah Valvata Snail (Valvata utahensis)	E		1
Snake River Physa Snail (Physa natricina)	E		1
Banbury Springs Lanx (Lanx n. sp.)	E		1
Idaho Dunes Tiger Beetle (Cicindela arenicola)	I		2
Blind Cave Leiodid Beetle (Glacicavicola bathysciodes)	I		2
Idaho Pointheaded Grasshopper (Arolophitus pulchellus)	I		2
Columbia Pebblesnail (Fluminicola columbiana)	I		3

Bird and mammal lists are a combination of personal observations (Paul McClain, Shoshone Field Office wildlife biologist), "Idaho Bird Distribution" Special Publication No. 13, and the Idaho Conservation Data Center database.

Appendix 7
Part B: BLM Sensitive Plant Species Known to Occur in the Shoshone Field Office Area

FAMILY Species	Status Fed.	 ID	 BLM
ASTERACEAE			
Bugleg Goldenweed (Haplopappus insecticruris)	I	G3	3
Hooked Stylocline (Ancistrocarphus (Stylocline) filaginea)		M	W
BRASSICACEAE			
Slickspot Peppergrass (Lepidium papilliferum)	C	G2	2
Biennial Stanleya (Stanleya conferifolia)	-	G1	2
CAMPANULACEAE			
Bacigalupi's Downingia (Downingia bacigalupii)	-	S	4
FABACEAE			
Camas Milkvetch (Astragalus atratus var. inseptus)	I	G4/T3	3
Picabo Milkvetch (Astragalus oniciformis)	-	G3	3
Snake River Milkvetch (Astragalus purshii var. ophiogenes)	-	S	3
HYDROPHYLLACEAE			
Least Phacelia (Phacelia minutissima)	I	G3	3
PORTUOLACACEAE			
Fringed Redmaids (Calandrinia ciliata)	-	R	W
PRIMULACEAE			
Cusick's Primrose (Primula cusickiana)	-	R	W
LOASACEAE			
United (Congested) Blazingstar (Mentzelia congesta)	-	R	W
ORCHIDACEAE			
Ute's Ladies Tress (Spiranthes diluvialis)	T	G2	1
Giant Helleborine (Epipactis gigantea)	-	S2	3
CYPERACEAE			
Buxbaum's Sedge (Carex buxbaumii)	-	S	3
POACEAE			
Tall Dropseed (Sporobolus asper)	-	S1	3

FWS (U.S. Fish and Wildlife Service):

E = Federally Endangered
XN = Experimental, non-essential population
T = Federally Threatened
P = Formally Proposed for Federal listing as T&E
C = Federal Candidates for listing as T or E
I = Species of concern to USF&WS but without formal federal status

ID (State of Idaho):

Animals:

E = Endangered
T = Threatened
SC = Species of Concern
(definitions from Idaho Department of Fish and Game web page, 2002)

Plants:

State Rare Species (Taxa rare within the political boundaries of Idaho, but more common elsewhere):

State Priority 1 (S1) = Taxa in danger of becoming extinct or extirpated from Idaho in the foreseeable future if identifiable factors contributing to their decline continue to operate; these are taxa whose populations are present only at critically low levels or whose habitats have been degraded or depleted to a significant degree.

State Priority 2 (S2) = Taxa likely to be classified as Priority 1 within the foreseeable future within Idaho, if factors contributing to their population decline or habitat degradation or loss continue.

Sensitive (S) = Taxa with small populations or localized distributions within Idaho that presently do not meet the criteria for classifications as Priority 1 or 2, but whose populations and habitats might be jeopardized without active management or removal of threats.

Monitor (M) = Taxa common within a limited range, as well as those taxa which are uncommon but have no identifiable threats.

Review (R) = Taxa which may be of conservation concern in Idaho, but lack sufficient data to base a recommendation regarding their appropriate classification.

Globally Rare Species (Taxa rare throughout their range):

G = Global rank indicator; denotes rank based on range-wide status.
T = Trinomial rank indicator; denotes range-wide status of variety or subspecies.
1 = Critically imperiled because of extreme rarity or because of some factor of its biology making it especially vulnerable to extinction (typically 5 or fewer occurrences).
2 = Imperiled because of rarity or because of other factors demonstrably making it very vulnerable to extinction (typically 6 to 20 occurrences).
3 = Rare or uncommon, but not imperiled (typically 21 to 100 occurrences).
4 = Not rare and apparently secure, but with cause for long-term concern (usually more than 100 occurrences).
5 = Demonstrably widespread, abundant, and secure.

BLM (Bureau of Land Management):

Type 1. Threatened, Endangered and Proposed Species **(1)**
These species are listed by the Fish and Wildlife Service (FWS) or National Marine Fisheries Service (NMFS) as threatened or endangered, or they are proposed for listing under the Endangered Species Act.

Type 2. Rangewide/Globally Imperilment Species **(2)**
These are species designated as FWS candidate species or are ranked by the Natural Heritage Program network as globally rare (G3 or T3) to critically imperiled (G1, T1).

Animals: Candidate Species and those ranked by the Natural Heritage Program network with global ratings of G1-G3 or T1-T3.

Plants: Candidate Species and those ranked by the Natural Heritage Program network with global ratings of G1-G3 or T1-T3 with a threat priority of 1-9

Type 3. Regional/State Imperilment Species **(3)**
These are species that are in danger of becoming extirpated from Idaho in the foreseeable future if factors contributing to their decline, or habitat degradation or loss, continue.

Animals: Idaho BLM sensitive species that (a) are not in Type 2, (b) are S1 or S2 (exception being a peripheral or disjunct species), or (c) score high (18 or greater) using the Criteria for Evaluating Animals for Sensitive Species Status or other regional/national evaluation lists (e.g., Partners-in-Flight scores).

Plants: Idaho BLM sensitive species that (a) are ranked by the Natural Heritage Program network with global ratings of G1-G3 or T1-T3 with a threat priority of 10-12 or (b) have a Idaho Native Plant Society ranking of Priority 1-2 or Sensitive.

Type 4. Species of Concern **(4)**
These are species that are generally rare in Idaho and (a) may be local endemics with currently low threat levels or (b) peripheral, rare species in Idaho.

Animals: Sensitive species that have an S1 or S2 ranking but are peripheral species to Idaho.

Plants: Idaho Native Plant Society sensitive species that are not Type 3. These are generally rare species with low levels of threats.

Type 5. Watch List **(W)**
Watch list species are **not** considered **BLM sensitive species** and associated sensitive species policy guidance does not apply. Watch list species include species that may be added to the sensitive species list depending on new information concerning threats and species biology or statewide trends. For plants, these are Idaho Native Plant Society "Monitor" and "Review" species and sensitive species (Types 2, 3, or 4) that are only suspected to occur in a BLM Field Office area. Watch list species include two general categories of species:

A. Local endemic, peripheral, disjunct or generally rare species with stable, downward or suspected downward population trends with (a) threats are not well understood and/or (b) species biology is not well understood.

B. Wide-ranging species with decreasing trend nationally or regionally, but not in Idaho (or status in Idaho is unknown).

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References Cited

Federal Register. December 15, 1999. "Notice of Intent to Prepare Land Use Plan Amendments for Land Tenure Adjustment and New Designations of Areas of Critical Environmental Concern (ACECs) within the Upper Snake River District (USRD), Shoshone Field Office, in Southern Idaho." Vol. 64, No. 240, pp. 70050-51.

Idaho Department of Water Resources. December, 1999. Feasibility of Large-Scale Managed Recharge of the Eastern Snake Plain Aquifer System.

McDonald, Greg, and Allen D. McGrady. 1999. "Pleistocene and Holocene Vertebrate Faunas from Idaho Caves," *in* Idaho, The Underground Gem, NSS Convention Guidebook. National Speleological Society: Huntsville, Alabama.

McLaughlin, W.J., N. Sanyal, and D.G. Spinosa. 2001. "The 1999-2000 Idaho Statewide Motor Vehicle Traveler Study." A cooperative marketing research partnership among the Idaho Travel Council; Idaho Department of Commerce, Division of Tourism; Idaho Travel Regions; The Idaho Transportation Department; Idaho State Patrol; National Institute for Advanced Transportation Technology; University of Idaho and The Department of Resource Recreation and Tourism, College of Natural Resources. See Web site: www.its.uidaho.edu/rrt, then click on 1999-2000 Traveler Study.

Moseley, Bob. November 1987. "Research Natural Area/Area of Critical Environmental Concern Recommendation for King's Crown." A report from The Nature Conservancy (Sun Valley, Idaho) to the Shoshone District, BLM.

Partridge, Fred. December 18, 2001. Personal communication between Fred Partridge, Lead Fisheries Biologist, Idaho Department of Fish and Game (, Idaho), and Bill Baker, Field Office Manager, Shoshone Field Office, BLM, regarding confirmed and unconfirmed presence of redband trout in nominated ACEC areas.

Quigley, T.M. and S.J. Arbelbide (Tech. Eds.). 1997. *An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins: Volume 2*. General Technical Report PNW-GTR-405. USDA, Forest Service, Pacific Northwest Research Station, Portland, OR. pp 620-624.

Robertson, Mark. 1989. " Statewide Survey of Mountain Quail, 1989." Idaho Department of Fish and Game report.

Smith, Randy. December 19, 2001. Personal communication between Randy Smith, Regional Game Biologist, Idaho Department of Fish and Game (Jerome, Idaho), and Bill Baker, Field Office Manager, Shoshone Field Office, BLM, regarding latest confirmed presence of and surveys for mountain quail in nominated ACEC areas.

Steward, Julian. 1938. *Basin-Plateau Aboriginal Sociopolitical Groups.* Bureau of American Ethnology Bulletin 120. Washington. (Reprinted: University of Utah Press, Salt Lake City, 1970.)

USDI - BLM. 1978. *Shoshone Isolated Wildlife Tracts Wildlife Habitat Management Plan*. Shoshone District, BLM. Shoshone, Idaho.

USDI - BLM. March 27, 1992. Noxious Weed Control in Wilderness Study Areas (WSAs), Environmental Assessment #ID-050-91040. Shoshone District - BLM, Shoshone, Idaho.

USDI - BLM. March 1994. *Bennett Hills Draft Resource Management Plan and Draft Environmental Impact Statement.* Shoshone District, BLM. Shoshone, Idaho.

USDI - BLM. July 5, 1995. Interim Management Policy and Guidelines for Lands Under Wilderness Review. Handbook Section H-8550-1.

USDI - BLM. 1997. "Upper Snake River District, South-Central Idaho Area Fire Management Objectives for Initial Attack."

USDI - BLM. 1999. "Upper Snake River District Cave Management Plan." Idaho Falls, Idaho.

USDI - BLM. November 22, 2000. "H-1601-1 Land Use Planning Handbook." BLM Manual Release 1-1667.

White, John A., H. Gregory McDonald, Elaine Anderson, and James M. Soiset. 1984. *Lava Blisters as Carnivore Traps.* Special Publication - Carnegie Museum of Natural History, 8:241-256.

Williams, Linda. *in* Jankovsky-Jones. June 1997. *Conservation Strategy for Big Wood River Basin Wetlands.* Idaho Conservation Data Center. Page D-8.

Williams, R.N., J.E. Carter, D.K. Shiozawa, and R.F. Leary. May 9, 1991. *Taxonomic and Genetic Analysis of Five Rainbow Trout Populations from Southern Idaho.* Boise State University Evolutionary Genetics Lab Report 91-2. Boise, Idaho.

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